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CINCINNATI

MEDICAL NEWS.

EDITED BY

J. A. THACKER, A.M., M.D., F.R.M.S., LOND.

Fellow of American Academy of Medicine, etc.

VOL. XXII., Old Series. 1889 VOL. XVIII., New Series.

CINCINNATI:
PUBLISHED BY J. A. THACKER.

Printed by the Elm Street Printing Company, 176 and 178 Elm Street.

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THE
CINCINNATI MEDICAL NEWS.

VOL. XXII. NO. 253. Old Series. JANUARY, 1889. VOL. XVIII. NO. 1 New Series.

Original Contributions.

The Treatment of Some Cases of Hysteria.

BY PHILIP ZENNER, A.M., M.D.,

Lecturer on Diseases of the Nervous System in the Medical College of Ohio.

A paper read before the Academy of Medicine, November 12, 1888.

THE treatment of hysteria calls for the exercise of all the patience, as well as most of the resources, of the physician. His success depends, mainly, upon his ability to, firstly, improve the nutrition and build up the general health of his patient, for the impaired tone of the nervous system is frequently due to lowered nutrition of the whole body; and, secondly, give a new moral tone to his patient, whose will-power has been subverted, and whose every thought arises from, or is modified by, the ever-present symptoms of disease.

A great advance in this direction, and a proud triumph for American medicine is the method of treatment instituted by Weir Mitchell, wherein, by means of seclusion, rest, massage, electricity, overfeeding, and the assistance of a judicious nurse and wise physician, he succeeds in accomplishing both of these ends at the same time. But unfortunately this method of treatment is costly, and therefore open to comparatively few.

I have selected the histories of a few cases for this paper, wherein the decided influence of moral treatment is clearly shown. In all of them the financial condition of the patients made the Weir Mitchell treatment impossible. The first case, like many of this class, is in one of a somewhat predisposed disposition, where, after the general health had been somewhat impaired for a long time, a comparatively trivial injury initiated a disease which has to be of indefinite duration.

Mrs. C., aged 30, of German parentage but born in Cincinnati, as a young girl was anæmic, often ailing, but never robust. She was married when twenty years of age, and had four children within five years. This rapid child-bearing, she believed, weakened her, she was in bed three months after her child was born, without there having been any apparent puerperal complication. When in the fifth month of her fourth pregnancy, she thought she injured herself in the act of sweeping. She had a dragging pain in the abdomen, on account of which she went to bed and remained there until the child was born. In fact, she had been in bed nearly all the time until I saw her, five years subsequently. She was during this whole period under medical treatment, having employed twelve different physicians. The only time there appeared to be any amelioration of her condition was while she was pregnant with her fifth child, which was born several months before I first saw her.

Perhaps an idea of her condition during this long period may be gained from a few words of the physician who requested me to see her, and who had had her under treatment a year or more. In answer to my inquiry, he said a detailed statement of her symptoms was unnecessary, as she had or had had all the symptoms that an hysterical patient could have. This statement is somewhat exaggerated, but we may learn from it that her ailments were so many as to almost distract her family and exceedingly annoy her physician.

I will describe very briefly her condition when I saw her. She was very spare and profoundly anæmic, had no appetite, an impaired digestion, heavily coated tongue, etc. Whenever she attempted to swallow there were spasmodic movemenfs of the muscles of the face and neck, very much interfering with her eating. Of her manifold subjective symptoms I need not speak, they were those common to hysterical subjects. She was evidently a woman of little will-power, who yielded readily to a feeling of illness, with a tendency to magnify its importance, and no thought that she might have the power to suppress or overcome it.

The patient had scarcely been out of bed in five years, at least had only been up for a few moments at a time, and then walked in a tottering manner. My first request was that she should get up and walk. To this she at first demurred as being too weak, but after the strong assurance that she could, and the imperative order that she should, do so, she arose and walked the floor a few times fairly well.

A few weeks subsequently the physician who had called me in consultation asked me to take charge of the case. He stated that the patient had been up and walked about more or less since, but that otherwise she was, if any change, worse than before. As I had been so successful in teaching her to walk at my first visit, at my second I undertook to teach her the more difficult and important lesson, to eat. On account of the spasmodic contraction of the muscles spoken of before she would take only a spoonful of fluid food at long intervals, never taking any solid food. There was always a cup full of slops at the side of her bed, which would disappear in the course of a few hours. Stating to her that, in order to restore her health, it was necessary to feed her much more generously, I attempted to introduce a stomach tube and feed her in that manner. But it was so disagreeable to her that she removed the tube before it reached the stomach. I now applied a strong Faradic current to her neck, stating it would make swallowing easier; and gave an imperative order she should eat. Again there was considerable demurring; especially when it came to taking solid food, but she nevertheless took three glasses of milk and some solid food, being the first respectable meal she had taken for a long time. After a few more lessons of this kind she took her meals regularly without assistance, the irregular muscular action gradually disappearing, especially when she was shown that she had it in her power to partially suppress them. She had lost most of her teeth, on account of which the gain from taking proper nourishment was less than it might have been.

For five years the patient had been a helpless invalid. I tried to teach her that she could, and should, do something for herself and others. It would be a long and tedious recital to relate the progress of this lesson. First it was to lift a glass to her lips, then to cut her own bread (acts which she was sure would be followed by deleterious results), then to do slight household duties, dusting ornaments, attending to the wants of her children and herself, etc., etc. Thus, little by little, her household duties were increased until she attended to them fairly well. It was a singular feature in the case, showing both her feeble will-power and the influence of a stronger will upon her own, that for a long time she would only do what was directly ordered by me. Only after she made considerable progress did she add of her own accord to the list of her household duties.

Another difficult feat to accomplish was to get our patient in the open air. She lived on the fourth floor, and had not been out of her apartments for nearly six years, though the heated season at this time made such a change very desirable. She had already improved considerably before we could persuade her to make this effort, and it required my own presence and imperative command, to succeed for the first time in getting her to descend four long flights of stairs. But after the first, succeeding efforts were made more easily, so that she soon came to be in the open air more or less every day.

We had thus gained a signal triumph—that one bed-ridden and helpless for many years, scarcely able to eat, and possessed of countless ailments, at the end of a few weeks was up and about, and comparatively well. But the untiring efforts and endless patience necessary to bring about this result can not be made apparent in this brief report. The fact I wish to emphasize is that the cure was effected chiefly by moral influences. It is true that she received malt and iron, and, for a time, daily applications of the Faradic current, and that both the patient and her husband attributed the improvement chiefly to the electricity. But all of these were but subsidiary agents. The improvement in general nutrition, due to a more generous diet, exercise and fresh air assisted in removing the morbid manifestations, and, it is to be hoped, will maintain the acquired health. The danger in such cases is from relapses, especially when there are moral influences of an injurious tendency. At one time, after considerable improvement, I did not see the patient for several weeks. In the meantime her infant died of summer diarrhœa, and her own condition deteriorated considerably. The more nearly perfect her general health can be established, the less the danger from such relapses.

The cases which follow are of shorter duration than the preceding one, but in most of them there are symptoms of greater violence. In the following one the whole train of symptoms is of traumatic origin. It is not rare that an injury precedes, and, therefore, may be deemed the cause of an array of hysterical symptoms.

J. S., age 18, formerly in good health, was struck on the head with a stone, which inflicted an ugly wound in the occipital region. He was unconscious for a short time, then, for a number of days, had repeated convulsive seizures. A period of, apparently, perfect health followed, but about four weeks after the injury he was again seized with violent convulsions. The latter came on very unexpectedly. He was found one evening with the limbs rigid, the body in the state of opisthotonus, teeth firmly clenched, foaming at the mouth, etc., and remained in a state of spasm several minutes. This spasm was followed by similer ones every half-hour during the night, and only on the following day did he regain consciousness. From this time on he had frequent seizures, averaging a half dozen a day, the paroxysms consisting partly of a frenzied condition, partly of violent tonic spasms. Often they would begin with the patient wildly tearing at his own person, especially trying to tear open the wound in the scalp, or fighting, biting, etc., those about him, or attempting flight from the window (these mad efforts seemed to be due to hallucinations in which he saw the scenes of his former injury), and then would follow a stage of tonic spasms of longer or shorter duration,

I saw the patient about two weeks after he had had a renewal of the convulsions. The surgeon, at whose request I saw the case, and who, eventually, asked me to take charge of it, had entertained the idea that the blow on the head had caused an intra-cranial lesion, and that there might be a demand for operative interference. But, inasmuch as there had been no fever nor headache, as well as from the character of the convulsions, I concluded that they were not a manifestation of organic disease, but rather of hysteria developing after a severe injury. Possibly the causal factor in such cases is not the injury *per se*, but the attending emotional disturbances, fright, etc.

The patient was put upon treatment in accordance with this diagnosis. Those about him, who were anxious and frightened by his paroxysms, were informed that the attacks were nervous, and would disappear under proper treatment; that their apparent alarm and worry made the patient worse, while a quiet, unconcerned demeanor would have the opposite effect. The patient was addressed in a similar manner. He was assured he would soon be well. This and the continuation of a preparation of chloral and the bromides he had previously taken, was the chief treatment. The paroxysms occurred less frequently, though they did occur occasionally. I saw one shortly after I began attending him, and in this instance painful applications to the surface brought the spasm to an abrupt termination. About two weeks after my first visit, I was called to him in the night with the statement that he had hydrophobia. He had been frothing at the mouth, unable to swallow, making a barking noise, etc., altogether producing a terrifying effect on the bystanders. I ordered in his hearing, a red hot iron, but before it appeared the paroxysm was ended. I then gave emphatic orders to use the cautery immediately if another spasm occurred. He did not have another paroxysm, and was altogether well in a few weeks. His health has been quite good since.

In the following case the nervous disease was preceded by, and probably due to, a general systemic disease. The nervous symptoms were more profound and durable than in the preceding one.

A. S., age 20, had had cough and fever, and was supposed to have incipient phthisis and valvular disease. Four or five months after his health began to fail it was observed that he had lost the use of the left side, and began to have frequent convulsive seizures, the description of which corresponds to ordinary hystero-epileptic attacks. I saw him about a month after the nervous symptoms appeared. At that time there was complete motor paralysis of the left arm and leg, those limbs being altogether powerless, while the muscles of the face were unaffected. There was sensory paralysis of the entire left side, the face, trunk, and extremities, the loss of sensation extending to the median line, and including all kinds of sensibility, that to touch, pain, and temperature, as well as muscular sense. The inner half of the field of vision of the right eye appeared to be lost, and the sense of smell was somewhat impaired in the left nostril. In addition to the symptoms there was slight rolling nystagmus when the eyes were moved far to the right or left; tremor in the right hand on exertion; muscles rather weak, as well as somewhat blunted cutaneous sensibility in the right side; sole reflex more marked in the right than left side, cremasteric reflex present on both sides, patellar tendon reflexes almost imperceptible. From the history of the case, as well as the array of symptoms, especially the profound paralysis of the left arm and leg, and left hemianæsthesia, with the absence of facial paralysis (the latter is usually absent in hysterical hemiplegia), I did not hesitate to diagnose hysterical paralysis. I assured the patient that he soon would beable to move his limbs, and that his recovery depended much upon his own efforts. Applications of a strong Faradic current to the paralyzed parts were ordered, and salicylic acid internally for headache and like symptoms. Within a few days there was some return of power and sensation in the paralyzed limbs, and in a week or two he could walk across the room with some assistance. He had very few convulsions after I saw him. At one time, perhaps six weeks after my first visit, he had several convulsions within a few days. I then ordered, in his presence, a red hot iron to be applied the whole length of the spine if another paroxysm occurred. He had no more convulsions. When the patient was able to get out of doors, as his progress toward recovery was very slow, I had him brought to my office and made applications of static electricity. From this time he improved rapidly, so that he could soon walk without a cane, and use the left hand nearly as well as the right. Static electricity is often of much value in cases of muscular paralysis as well as muscular spasms, but nevertheless, I believe its good effect in this case was chiefly due to the mental impression. There is something in the large size of the static machine, and the large, sharply-stinging sparks flying into the patient with a loud, cracking sound which strongly impresses the imagination, so that the moral influence is far greater than that produced by any other kind of electricity. I believe that the recovery in this, as in the preceding case, is almost entirely due to moral influences.

The fourth case is of interest, both on account of the apparent, and real relation to lead poisoning, and the therapeutic measures employed.

J. B.. age 23, has usually been in fair health. A sister had hysterio-epilepsy. At the beginning of this year worked in a lead factory six weeks, when he was seized with lead colic. He also had tremor in the upper and lower extremities which persisted for a month or more.

A few months subsequently, while working on a farm, (he did not again work in lead) he was again seized with tremor in the lower extremities. I saw him after he had had this tremor two months. He was not in good health at the time, had a coated tongue, no appetite, and some diarrhœa. There was a high degree of tremor at the lower extremities, so great as to make walking almost impossible. It was present nigt and day, ceasing only during sleep.

The first thought in a case of this kind is that the tremor is from lead intoxication. But as he worked only a short time in lead, and some time had elapsed since, during which he had been apparently well; as there was no other sign of lead poisoning, blue line on the gums, etc., and as tremor is not a common symptom, and more likely to be found in cases of profound lead intoxication, I believed the tremor in this case to be of an hysterical origin. Charcot, especially, has pointed out that hysteria may be caused by lead poisoning. In fact, a hysterical train of symptoms may follow any considerable impairment of health. But it does not appear that the nervous symptoms in this case are even indirectly due to lead, for there does not appear to have been any profound lead poisoning. The man had seen men suffering with lead tremor, and with the tendency to imitation often found in hysterical subjects, when impaired health favored the production of hysterical symptoms, they were manifested in this form.

He was put upon treatment in accordance with this diagnosis. After his stomach was in better condition he was put on a generous diet and tonic medication. As in the other cases, he was assured the disease was merely nervous, and urged to exert his will-power in its suppression. His condition began to improve, though the improvement was somewhat slow. Ten days after my first visit I made an attempt with hypnotism, which was quite successful. While in the hypnotic state the patient was very susceptible to the influence of suggestion. The tremor ceased altogether at command, and began again with a suggestion to that effect. Cataleptic states, or flaccidity of the extremities, could be produced at will. False perceptions could also be produced by suggestion, for instance, tell him a stick was a cigar, and he would put it in his mouth and puff at it. He was hypnotized three times in all. After each trance the tremor diminished considerably. After the third it disappeared altogether. He remained under observation a few weeks longer, during which time the tremor did not return, and his general health was good.

I have sometimes observed a tendency, even with physicians, to look upon the symptoms of hysteria as altogether imaginary. Such a view is quite erroneous, although mental impressions often have a great influence on the production, the aggravation and the removal of symptoms. It is a still nicer question to determine to what extent there is simulation of symptoms. The oft-perverted character, and the craving for sympathy, of hysterical subjects make the occurrence of simulation not very infrequent, though we perhaps often err in believing that simulation is present to a greater extent than it really is, at least we will almost always find real disease behind. Although only partly germain to the subject of the paper, I will briefly report a few cases in which simulation played an important role.

B. A., age 50, a large, muscular man, slipped and fell on a smooth floor, striking his head in the occipital region. He was somewhat dazed by the fall, but did not appear to suffer much afterward. Three weeks after the injury, while at his work, he suddenly fell in a severe convulsion. A few days subsequently he had a second convulsion, and from this time on had them more frequently. The patient's condition gradually got worse, so that in a few weeks he was bed-bound, had, at times, four or five convulsions in twenty-four hours, was delirious much of the time, and there was manifested a right hemiplegia or hemiparesis, hemianæsthesia, blindness in the left eye, and impaired vision in the right. After this worst stage had continued a few weeks, the patient's condition began to mend slowly.

I saw him, for the first time, nearly a year after the time of his fall. At that time he was having convulsions about once a week. He complained of severe headache, especially in the occipital region. He seemed to be exceedingly nervous, would be very much startled by a noise, or the like.

There was some paresis of the right upper and lower extremities, the grasp being feebler, and the foot dragging somewhat in walking, on that side. There was anæsthesia of the left side of the head and face, and of the entire right half of the body, excepting the head and face. There was blindness in the left eye. This, in brief, was the condition at that time. While I was examining the patient he suddenly fell in a violent convulsion. The latter was of the ordinary hystero-epileptic type, not mere clonic and tonic spasms, but a violent throwing about of the whole body—"struggling," as they had well termed it. At one time there was extreme opisthotonus, at another he threw about violently with the arms and legs and entire body; but the most terrifying feature was a constant throwing of the head backward, as though he were trying to dash it to pieces. These, and grinding of the teeth and moaning and groaning noises, mad up the chief manifestations of the paroxysm, which was o of the most violent I had ever seen. It was only because he was held by several persons, and because a pillow was held under his head all the time (the first measure always taken when a paroxysm came on) that he did not do himself considerable injury. The paroxysm came on before my examination was completed, and the latter was necessarily deferred until a second visit.

I had visited the patient with the idea that there was a lesion within the cranial cavity, which, possibly, might be removed by operative means. But there was something in the whole array of symptoms, as I saw them, which excited a suspicion in my mind that they might not be altogether real, so that I was prepared at the second examination to test their genuineness. I began with vision, as he claimed to be blind in the left eye. When the right eye was covered with the hand he said he could not see a lighted candle just before it—in fact, could not distinguish light and darkness. But, with both eyes uncovered, when a prism was placed in front of the sound eye, he saw double; and when, now, a metal disk covered the sound eye, without his knowledge, he continued to see apparently as well as before. A clearer case of deception could scarcely be imagined.

The cutaneous sensibility was next examined. There was impaired sensibility—that is, a light touch was unfelt, while firmer pressure or the prick of a pin was quite perceptible; the anæsthetic area being in the left side of the face and the right side of the body. The border line of the anæsthetic area was about the neck, but its exact locality seemed to vary in a peculiar manner. For instance, if the extent of anæsthesia on the right side were tested, the examination being made from below upward—that is, observing the state of cutaneous sensibility first in the lower extremity, then over abdomen, then chest, and so on upward—the patient would not feel light contact upon the surface until the lower maxillary line were reached. If, now, the examination were made in the opposite direction, beginning with the forehead, where there was no anæsthesia, and extending downward, the patient would feel the lightest touch until the upper part of the chest was reached. So there was an area extending beyond the upper and lower limits of the neck where the patient would acknowledge the presence of cutaneous sensation or not, according as the examination began above or below. The same was true as regards the border line of the anæsthesia in the left side.

Now, there is nothing more unsatisfactory than examinations as to the condition of sensibility, very conflicting results being obtained almost at one and the same time; but such flagrant inconsistencies as were present in this case were, in my mind, positive evidence of deception on the part of the patient.

I will not occupy your time by detailing my further examination, but I thought there was some imposture as regards the extent of muscular paresis, and as to some other symptoms. As to the complete genuineness of the headache and the convulsions, I could form no opinion, but it is at least noteworthy that, notwithstanding the frequency and the violence of the convulsions (it is true his folks always tried to be near him), he never injured himself.

To complete the clinical picture in this case, I must give something of the patient's history. He had at one time been a man of means. His last employer, who had seen much of him and had employed him in various capacities, spoke of him as a man of admirable, even noble, traits of character. He thought so much of him as an honorable and upright man that he provided him with physicians and medicines, and, to a considerable extent, supported his family during his sickness.

We have, then, in this case, a man, of the character just delineated, acting the clearly fraudulent part we have seen. It is scarcely necessary for me to state that we have to do with a diseased person, not with a malingerer. His imposture is the result of his disease; it is, if I may so speak, a symptom of a diseased character. Just which of the symptoms are genuine ones I will not say, but that a man, with any consideration for himself and others, should intentionally assume the role of disease, should yield up a fair living for his family to a pittance provided by charity, and inflict suffering upon himself as well as burden his family with care and anxiety, is beyond the bounds of belief. My diagnosis was, therefore, functional disease—hysteria—one of the manifestations being changes in character, as evinced by deception.

With this diagnosis I requested his employer, at whose request I saw the patient, to have him brought to Cincinnati, for he lived at some distance from the city, where he could be under my own observation and at the same time be placed under different moral influences. As I gave a favorable prognosis his benefactor readily consented to pay the expenses of his residence in Cincinnati for a few weeks. My first measure, after seeing him in his room, was to speak plainly to the patient, telling him what I had detected in his actions, and to assure him that with an effort on his part he might soon be well. He seemed horrified at the suggestion that he was in any way feigning disease, which he would not acknowledge, but promised to try in every way to get well. After he had been in town about ten days, as he had no convulsions for thirteen days (nine days having been the longest interval that had ever occurred previously), I suggested to his benefactor to take him to a nice country place and let him do light work. The patient seemed glad to undertake something of this kind, but that evening he had a convulsion. Nobody was with him when it came on, and he received several, not slight, bruises on the head and face. About a week later, as his appetite and digestion seemed to be changing for the worse, he was sent to his home. Before he left I again made a careful examination, the only one since that upon which my diagnosis was based. The anæsthesia had altogether disappeared. He still limped in walking, though perhaps less than before. He did not pretend to be blind in the left eye, but when I gave him a newspaper to read he read the smallest type with the right eye, while he could only recognize large type with the left. I now, as on the former occasion, covered the right eye without his knowledge, and found that he continued to read the smallest print. I again confronted him with the fact of deception, but he did not act as though detected in a falsehood, only saying quietly if he was deceiving he was not aware of it.

As the patient lived at some distance from Cincinnati he passed from under my observation, but I heard many months afterward that he still had convulsions occasionally, and was doing nothing in the way of self-support.

Could the man have been kept under treatment for a much longer time he probably would have recovered completely, but this was not done, and was not even asked for, on account of the necessarily heavy outlay, with the possibility of a failure in the end.

I will briefly report another case of this kind, in which the element of imposture played, perhaps, a more pronounced role than in the one just given.

D. D., age 36, was in a hospital in Baltimore about a year ago, with an attack of hemiplgia, which was of short duration. He was recently admitted into one of our charitable institutions with paralysis of the throat, where I was requested to see him by the physician in charge. When I saw him he could only swallow liquid nourishment, and that with great difficulty; could speak only in a whispering, almost unintelligible voice; could not move tongue or lips when requested to do so; in short, presented the symptoms of glosso-labiopharyngeal paralysis. But there was not the apparent atrophy, and none of the fibrillary tremor, usually found in cases of bulbar paralysis with the symptoms of advanced disease found in this case, and when further tested it was clearly seen that he did have some power to move tongue and lips, for in pronouncing some letters, l, b, etc., in laughing, etc., there were the usual movements of the tongue and lips. The muscles of the lips and tongue were tested with the Faradic current and responded quite well, showing there was no marked pathological changes in the nerves or muscles. Painfully strong currents were now applied to the tongue, and he was informed that he had the power to move it and the current would be applied until he succeeded in doing so. He finally protruded it as far as the edges of the lips. The attendants were now requested to place tempting food before him, and not let him know that he was under observation. They found that he ate, when not under observation, as well as others.

When I saw the patient again he could swallow and move tongue and lips better, and his speech was more distinct, though still whispering. I charged him with deception, and threatened him with dismissal from the institution if the fraudulent manifestations did not cease immediately, referring especially to his speech. He denied the deception, and, notwithstanding my threat, his speech, though improved, remained very indistinct. I did not see the patient again, but he left the institution about a week later, his speech at the time being much more distinct, and being otherwise in good health.

In this instance the malingering element was, probably, the chief factor in the case, but I do not think it was everything. There was behind it a modicum of disease—disease of an indefinable character. Simulation of profound disease, paralysis, etc., by perfectly healthy subjects I believe to be exceedingly rare. As a rule it is best to treat cases of the kind detailed above like ordinary hysterical cases. It is a question in my mind whether it would not be better in some instances to entirely ignore the simulation.

This paper has become more lengthy than I intended, as I wished merely to emphasize a fact known to you all, but which can not be too strongly impressed on our minds—the importance of moral influence in the treatment of hysteria. The success of the physician will depend largely on the confidence he can inspire in his patient; on his power of arousing and strengthening the dormant will powers; on his tact and shrewdness and insight into the character and needs of the individual case.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

SOME PRACTICAL OBSERVATIONS ON THE SUBJECT OF NURSING.

BY DR. AUVARD (Paris),
Accoucheur to the Hospitals.

THERE are four classes of women who can not nurse their infants: Those who do not want to nurse them, and who always have a good pretext for not doing so, and unfortunately this is not the least numerous class; those whose health leaves much to be wished for, whether the cause of their debility be local or general; those whose local secretion is insufficient, either because the gland is rudimentary, or because some pathological condition has supervened to complicate the situation; finally, those who from a vicious conformation of the nipple, or from the appearance of cracks and fissures, are rendered unable to continue nursing. It is of the last category that we shall speak.

The malformations of the nipple, and the fissures which appear under the influence of suction, have a very close pathogenic relationship. It is most frequently the badly-formed nipples which become excoriated. The same preventive and curative treatment is applicable to both. It is therefore but natural to put these two conditions under one head.

I. When the nipple is badly formed, when, in place of being sufficiently prominent, it is flattened or even retracted umbilicated, the infant, despite the best will, can not seize it. It is therefore a veritable vice of conformation which renders the function impossible, just, as for example, hypospadias prevents fecundation. If, however, despite the difficulties, the infant succeeds in grasping the nipple, it will draw on it strongly, demanding of it its food in an enraged way, and the organ thus pulled on, stretched, chewed, will soon ulcerate.

The fissures and cracks are constituted. These simple words recall many painful recollections, both to the mothers and to the physicians who have attended them. The fissures and crevises are a source of a multitude of troubles to the mother; on the one hand the great intolerable pain, the almost exquisite suffering which they cause; suffering which renders nursing impossible despite the best will on the part of the mothers; on the other hand, these wounds are so many open doors for the admission of microbes with which the woman is surrounded, and which penetrate by the slightest solution of continuity, thus setting up now local now general affections.

To prevent, to cure these pathological states is to render to the mothers, to humanity, the greatest service in the power of the physician.

II. Anybody who thoroughly understands this part of the pathology of the nipple, will reach promptly the conclusion that the indications of the prophylactic and curative treatment are the following:

It is necessary, before lactation, to develop the nipple and to fortify its epidermis.

It is necessary at the outset of lactation to remove all causes of irritation, of contusion, of forcible stretching—usual causes of fissures and cracks.

If, despite all the precautions, the wounds nevertheless do appear, all the efforts of the physicians should be directed to soothing the pain, so as to render nursing possible, and to hasten the cicatrization of the ulcerations of the nipple.

Summed up: It behooves us, at the last period of gestation, to institute a hygiene of the nipple; at the outset of lactation to avoid by special precautions the production of fissures; lastly, if fissures are produced, to endeavor to cure them by the aid of appropriate measures.

These are the indications for the preventive and curative treatment of the nipple. Let us see how they can be fulfilled.

III. To institute in the last period of gestation a hygiene of the nipple.

It would certainly be well if this hygiene were not limited to the end of gestation. The tight dresses of young girls' are not very favorable to the development of the mammary gland and of the nipple; it seems to me, however, that here also, as in other chapters of pathology, the evil effects of the corset have been exaggerated; however, as we are not consulted except during the period of gestation, we must care for the nipple during this troubled period of genital life.

During the first eight months it would be imprudent to attempt any thereapeutic whatever. The nipple is in intimate relationship with the uterus; any excitations of it might produce premature labor.

During the last month, when the normal term of pregnancy has been neared, the physician may become more audacious and attempt, even at the risk of hastening delivery by a few days, a prophylactic treatment.

At this period, I said before, it behooves us to develop the nipple and to strengthen its epidermis.

Among the numerous measures advised for the purpose, these seem to be the best:

During the first fifteen days of the ninth month, exercise the nipple every morning by means of light tractions, which the woman herself can manage, and after this local gymnastic, rub well the whole nipple in its circumference, and especially at its base, with a linen cloth moistened with alcohol.

In the last fifteen days of the ninth month, that is to say the last two weeks of pregnancy, the treatment may be more energetic in proportion as the fears of producing premature labor diminish. Whilst continuing the washings with alcohol, it is well to develop the nipple by the aid of suction. It has been advised that this be done by the husband, or by the mother, or a very young pup of large species. Such a proceeding has seemed to me, to say the least, singular, and I very much prefer indirect suction by the aid of some instrument.

The instruments are numerous; there is a great variety of pumps; even a plain pipe has been advised. This is how I do: I employ the nipple shield with two tubes, which will be described further on. The glass cupola is applied over the nipple, the longer tube is taken into the mouth by the woman, and the shorter piece, the mouth-piece being removed, is put into a glass tube, or vessel containing alcohol. The woman asperates, and a certain quantity of alcohol rises into the glass cupola and bathes the nipple. The inferior (shorter) tube is now compressed by the fingers, and the aspiration continued. Under the influence of the vacuum thus created in the glass cupola, the nipple develops itself, is bathed at the same time over its whole surface with alcohol, and the more so the more contined the aspiration.

Thanks to these means I reached the desired aim: Development of the nipple by suction; invigoration of the epidermis by the contact with alcohol.

IV. Second Point. *At the outset of lactation avoid, by special precautions, the production of fissures and cracks.*

There is but a sole cause for the production of fissures, that is a traumatism exercised by the mouth of the child. All the other etiological considerations are only secondary and are effaced beside this one. There is but one way of avoiding this traumation and still continuing the nursing, and that is by the use of an artificial nipple. The best of these, and the one most employed, is that of Dr. Bailley, consisting of a glass cupola, with a rubber tit.

This instrument has, nevertheless, one inconvenience, an inconvenience so great that one is sometimes compelled therefor to abandon its use. The infant, to aspirate the milk through it, is compelled to make much greater efforts than in the natural state, and frequently becomes so discouraged in this task, so troublesome to its young powers, that it will refuse to suck altogether, and instead will begin to cry. It requires complaisant and vigorous infants to succeed with the artificial nipple of Dr. Bailly. To avoid trouble, I have had constructed a nipple shield, which enables the mother to aid the infant, and thus save the infant the violent and fruitless efforts at suction.

In the tit destined for the mouth of the child, there is a small rubber valve which enables the mother to create the necessary vacuum in the glass cupola, even when the child abandons the rubber extremity.

Its mode of employment is equally simple. The mother begins to aspirate, the milk flows into the glass cupola and directs itself spontaneously into the tube ending in the mouth of the infant; a few suction motions suffice to bring the milk into the mouth.

Thanks to this modification, nursing by aid of this artificial nipple becomes easy, even less difficult than when the breast is taken in the natural state. It is well to use this shield in the first days of nursing, an epoch most propitious to the production of cracks and fissures, and gradually it can be used less frequently, until finally the breast is used altogether without it.

I have never seen fissures produced where this instrument was used when the woman was sufficiently intelligent to understand the necessity and advantages of its development, and when she did not neglect through laziness to use it regularly.

Third Point: *The fissures and cracks once produced, endeavor to cure them whilst still continuing the nursing.*

Prevent the pain of nursing—prevent the admission of microbes—obtain cicatrization as promptly as possible. This is the triple aim set before the accoucheur.

To prevent the pain of nursing we have an excellent means in the muriate of cocaine used in solution of 1 to 20, although its effects are not equally happy in all women.

It has been said that its bitter taste has a tendency to disgust the infant with the breast; but by using the shield as I have advised, this reproach will be avoided. The nipple shield has the further advantage, as regards the pain, that it is rendered less severe by the fact that the pulling and chewing of the nipple by the child are avoided.

To prevent the accession of microbes, the breast should be covered with a linen cloth, imbibed with an antiseptic solution, either a solution of boracic acid, 4 to 100, as I have seen used in the Maternity of Lariboisiere in the service of Prof. Pinard during my internate, or simply alcohol, according to the custom of Prof. Budin in La Charite. I have been able to compare the effects of both, and must say that I prefer the alcohol, because to its antiseptic action it adds that of forming, of hardening the nipple, and seems to stimulate cicatrization better than the boric acid. I have also tried with the object in view a dry dressing of iodol, hoping that by it I could still further hasten cicatrization. I was disappointed in the attempt, and had to return to the wet dressing.

Finally, to obtain cicatrization as quickly as possible, we must endeavor to give the nipple as much rest as possible. If a woman could rest from nursing thirty-six hours from the time of the appearance of the fissures, they would be completely cicatrized at their expiration. We see frequently when in the case of small fissures (and it is not more true for profound ones), a woman is for any reason compelled to suspend nursing, the two lips of the wound come together and unite by first intention. Cicatrization is sufficiently strong at the end of a day and a-half.

Unfortunately such a rest of thirty-six hours is impossible. It would be possible, if absolutely necessary, so far as the child is concerned, which might mean while it be nourished artificially or with the milk from the breast. But it is impossible for the mother, because if a breast is not emptied in that length of time, the milk stagnates therein, the secretion is arrested, and she is exposed to the dangers of the functions of the gland being arrested or modified.

Such a cure by rest would therefore be worse than the malady, since it would end in arrest of the lacteal secretion. It is therefore best to continue the nursing with the affected nipple, whilst at the same time we attenuate the evil effects of such nursing, as I have indicated before, by means of the nipple shield. We may see the fissures through the glass cupola opening at each nursing, and sometimes a few drops of blood escape, but the traumatism is relatively benign, and little by little the fissures diminish in size, and finally are çompletely cicatrized.

IV. Resumé: Precautions to be taken to render nursing as easy as possible, to avoid the production of fissures and cracks, and when these are produced to heal them as rapidly as possible, are as follows:

During the last month of pregnancy: At the outset slight tractions on the nipple and light frictions with alcohol. Later, suction of the nipple by means of the nipple shield with double tubes, which allows of a simultaneous alcohol bath.

At the outset of lactation before the appearance of fissures: Employment of the nipple shield, so as to avoid traumatism by the mouth of the child, the usual cause of the fissures. Continue its use absolutely and entirely for fifteen days, after that gradually omit it.

During the period of nursing if fissures are produced: Prescribe simultaneously the applicatian of cocaine to diminish the pain, and of alcohol as an antiseptic to prevent the penetration of microbes; the use of the nipple shield to attenuate in a measure the traumations of the nipple.—*Abeille Medic. Un. M. d' Can.*

Baltimore Academy of Medicine.

STATED MEETING HELD DECEMBER 4, 1888.

DR. H. M. WILSON, the President, in the chair.

TRANSPLANTATION OF THE CORNEA.

Dr. Julian J. Chisolm reported the progress made in seeing by the patient into whose opaque cornea he had transplanted a disc of clear cornea from a living rabbit. Six months had now elapsed since the operation. The circular transparent corneal graft, cut out of the rabbit's eye by the trephine, fitted accurately into the hole which the trephine had made for it in the human cornea. It adhered at once, and from that time has become a portion of the man's eye. To insure union with contiguous portions of the eye it had to receive blood-vessels and become infiltrated with inflammatory deposits. This was expected of it. It could not have remained transparent and lived. Five blood-vessels can now be traced running into it from all directions, and yet the graft has not become pannitic, as in the human cornea. Through its grayish substance the dark color of iris and pupil behind it can be detected. The patient can now move about without help, when before he did not move a step without the aid of a helping hand. He sees large objects ten feet off, and is improving in vision every month. He now walks unattended about the country roads in the vicinity of his home. His facial expression has undergone a complete change, from one of anxiety and doubt to one of confidence and cheerfulness. The piece of transplanted cornea is in the stage of interstitial keratitis, and is slowly clearing up as does this pathological condition. The patient is watched from month to month and an improvement is always noted on his return. Objects not seen at a previous visit can be detected. The slow improvement is quite as rapid as is found in some cases of interstitial keratitis in which months and even years are required to give useful sight to blind people; and that in children in which the recuperative processes are much more active than in adults. It may take twelve months yet before the benefits of the operation can be secured. In the meantime he has already acquired an amount of useful sight quite enviable when compared with his blindness before the transplanting. He is quite satisfied with the improvement in vision as it is, even should he obtain no more sight, and yet there is every evidence of steady, even if it be slow, progress toward better seeing. The amount of comfort which this patient already derives, makes the operation of transplanting a piece of clear animal cornea into the opaque member of the human eye a legitimate surgical operation, full of promise to thousands of active young persons who up to the pressent time have been considered permanently blind beyond-the resources of surgical skill. So precious is the blessing of seeing that, when it has been lost, any means toward restoration, even in part, of this doubly valued sense is worth the trying. Skin grafting with a piece of cornea, in suitable selected cases promises the much longed-for relief.

Dr. W. C. Van Bibber then read his paper on

PREVENTION OF YELLOW-FEVER IN FLORIDA AND THE SOUTH.

Dr. George M. Sternberg, U. S. A., spoke as follows:

"*Mr. President and Gentlemen*:—I quite agree with the author of the interesting paper which we have heard, that yellow fever is a preventible disease, that this may be accomplished by excluding the exotic germ, by disinfection, and by local sanitary improvement at the points subject to invasion.

"Twenty-five or thirty years ago many of the physicians in our principle southern seaports maintained that the disease was endemic. But recent experience has proved that this was a mistake, and at the present day there are very few who remain unconvinced as to its exotic origin. Although I think it possible that towns might be made yellow-fever proof by local sanitary measures I think it doubtful whether we have at the present day any seaport cities which are in such an ideal sanitary condition that it would be safe to remove all quarantine restrictions.

"I do not believe that Gen. Butler kept yellow fever from New Orleans during the war by cleaning up the city. I went to New Orleans in 1862, and know the condition of the city at that time—that it was in such a sanitary condition as to be yellow fever proof I can not admit. The true cause of its exemption during the military occupation of the city was the limited commerce with infected ports and the rigid quarantine restrictions.

"The origin of epidemics is often hard to trace. It sometimes occurs that the first cases are of local origin, in individuals who have not been away from their homes. This was the case in Decatur. The first case was that of a fruit dealer named Spencer. Seventeen days before Spencer was taken sick a man from Jacksonville, spent some time with him, and the most plausible theory of the origin and the epidemic is that he introduced the deadly germ, either in his baggage, or his excreta, and that finding a favorable soil it multiplied, and an infected center was established in the vicinity of the house in which Spencer lived.

"It nearly always happens in a place where yellow fever has not previously prevailed that the local physicians call the disease by some other name—usually malarial fever—and it is not until a series of cases have occurred that the true nature of the disease is recognized.

"History repeated itself in this particular at Decatur. Even when Dr. Jerome Cochran, State Health Officer of Alabama, pronounced Spencer's case to be yellow fever, a majority of the local physicians remained unconvinced. I may remark that nine out of ten of the local physicians contracted the disease and that five of the nine died. At Decatur a considerable portion of the town was not invaded, and for some time the infected area was strictly limited to two or three squares in the vicinity where the first cases occurred. The local sanitary condition was bad, and many residents of the town ascribed the outbreak to recent excavations which had been made in the streets of the infected district. It was generally agreed that a very offensive odor was given off from the soil where these excavations were made. Instead of privy vaults, it is the custom in Decatur to deposit excreta in boxes placed upon the surface of the ground or in shallow pits. Parkes in his work upon "Hygiene" insists that yellow fever is a fæcal disease, and I am beginning to think that he was right."

Dr. J. J. Chisolm said that in former times he lived in the yellow fever country. Charleston, S. C., prior to 1860 was invaded by yellow fever every two or three years. A certain duration is necessary. It is not often found in children or negroes. It was called there the stranger's fever, because they almost always caught it. The disappearance of a native from the city disturbed his immunity. He went to Paris and came back and had yellow fever. He thought you could nearly always trace the disease to importation. Charleston is like New York in situation. There is a strip of land and a river on each side. There is much lumber on the east and west sides. From these points the fever generally started and would slowly creep up with no jumps. It never got into the country. It occurred on an island near Charleston and in the city there was no infection. He believed that individual contamination never gave rise to the disease. There has been no epidemic there for a number of years, but there has been rigid quarantine, and the sanitary conditions are just the same.

Dr. James Carey Thomas asked if no plan of treatment but the expectant plan had been used.

Dr. Sternberg said he had suggested a plan on theoretical grounds when he was in Havanna. As a result of his views, knowing that the secretions were highly acid, and knowing that almost all sorts of treatment had been tried, such as acid treatment, tincture of iron, sulphuric acid lemonade, etc., he decided to use an alkaline and antiseptic treatment, and therefore ventured to suggest the following:

℞ Sodii. bi-carb. grammes x (gr 150).
Hydrarg. bichloridi; centigrammes, 11 ($\frac{3}{10}$ gr.).
Aquæ Puræ, litre 1 (1 quart.). M.

Sig.—50 grammes (about 1¾ oz.) every hour; to be given *ice cold.*

This treatment was adopted by Dr. Raphael Weiss, house physician at the Garcini Hospital who reports that he has treated 13 cases without a death. When I left Decatur all of the physicians were using this treatment, and their results have been very satisfactory.

Dr. James Carey Thomas said that Dr. Jones, of New Orleans, gave the sulpho-carbolate of soda, and he asked Dr. Sternberg if he knew of this treatment.

Dr. Sternberg said he did not.

Dr. Chisolm said that in 1856 he wrote up the history of the Charleston epidemic, and looked up the history of the mortality and found that it ran usually about forty per cent. At first there is a tendency to call nothing yellow fever and at the end everything was called yellow fever, thus making the mortality less at the end. He had noticed with interest, not only the violence but also the activity and promptness with which a stranger just arriving took the disease, and gave an example. He said the old treatment was to give mild cathartics and orange juice.

Dr. Sternberg said the patients looked forward to his treatment because it was cold. They have no gastric distress and would ordinarily secrete urine more freely and with less albumen.

Dr. John R. Uhler asked if liquor sod. chlorin. had been tried. During the epidemic in Memphis he wrote and suggested that treatment. The idea was to break up the urea and prevent uræmic symptoms and also to act as Dr. Sternberg suggested. He would use it internally and by the rectum.

Dr. A. K. Bond asked if there was any intensity of the poison as the disease went on.

Dr. Sternberg said that in yellow fever epidemics there is sometimes at the outset a mild form, and the early cases do not end fatally and are not noticed. It would be difficult to answer this question in an absolute manner, but it is quite possible, because the season is advancing.

Dr. Uhler asked if Dr. Sternberg had examined the secretion of the nose and Schneiderian membrane for bacteria.

Dr. Sternberg replied that he had made no special examination in this direction.

Dr. Chisolm said he could not recall the fact of any one coming in after a frost and catching it. Persons residing in the city during the summer could catch it after a frost.

Dr. Sternberg said the question of incubation was a very important one. His own observations and experience have led him to believe that the period of incubation was rarely over five days.

Dr. Van Bibber said the government officer at Camp Perry had fixed the period of incubation at five days.

William B. Canfield, M. D., *Reporting Secretary.*

STATED MEETING HELD DEC. 17TH, 1888.

The President **Dr. H. M. Wilson**, in the chair.

Dr. W. C. Van Bibber spoke on the subject of

ASPHYXIA FROM ILLUMINATING GAS.

He said that in 1879, a young man came to Baltimore and went to a hotel, and in the morning was found asphyxiated from the gas. Dr. Morris called him in. They put the patient under the window, fanned him and gave him hypodermics, as he could not swallow. About a year later he saw another similar case and a year after that there were two at Guy's Hotel. They recovered. And now a few days ago two persons were similarly affected. As far as he knows there is nothing to do but give fresh air by fanning them and otherwise, and give stimulants. It does seem as if something more ought to be done in such a tangible and common disaster. The treatment here has not been so far very favorable, for of the six cases he related four died. In answer to Dr. Michael, he said he used artificial respiration.

Dr. B. B. Browne said that many such cases occur from the fact that the gas was down low, and the pressure was taken off at the gas works, and then it may go nearly if not quite out and thus gas may escape into the rooms.

Dr. William B. Canfield said he thought the gas was apt to go up higher at night, from the fact that gas in many parts of a house was turned off. In his own experience, he had had the gas in his own room at night, blown out from the wind and had not detected an odor, which was probably due to the fact that the window was open. He thought that in most cases the persons were in a state of intoxication, which made the unconsciousness from gas still harder to arouse.

Dr. John R. Uhler said he had not treated cases of this kind, but he thought better treatment was necessary. The more odorless gas has proved the most dangerous. Water gas is dangerous. It gives out intense heat, but not so much light. When a certain substance gets hold of the hæmoglobin of the blood it stays and will not let go. Administering oxygen and fanning is very good, but the only rational treatment is the one by which we can get rid of these killed red corpuscles and add new red ones. Transfusion is the best for this and it is the only sensible treatment.

Dr. J. Edwin Michael thought such treatment was tried recently. The majority of such cases end fatally, but this treatment is rational and should be used above all other means, especially after artificial respiration which should be used first.

Dr. J. R. Uhler said the prevention of these matters was more important still. In mines there were so many appliances to warn against the excess of carburetted hydrogen. One way is by a sponge of platinum, another by an electric annunciator. Or we might do as in some parts of Europe in the hotels, that is, have gas on the first floor only, and use *bougies* or candles on the other floors.

Dr. A. K. Bond said he had had one case to deal with. A man, repairing a pipe in a cellar was heard to cry out and was immediately brought up almost overcome.

He could just walk. He had had little experience with such cases and gave stimulants. A man, who also worked for the gas company came in and said he must lie down with his chest exposed. He was taken out in the open air (it was on a cold day) with bare chest and head and he gradually returned to consciousness. The gas men have much experience of this kind, as few escape it. They gradually inhale the gas without noticing it, and then after a certain point they are overcome and not able to escape. They all agree that fresh air is the best treatment.

Dr. George W. Miltenberger then read a paper entitled

ANTE-PARTUM HOUR GLASS CONTRACTION OF THE UTERUS.

Dr. H. M. Wilson thought that in all such cases the fatal collapse was signalized by embolism.

Dr. B. B. Browne thought that the singular part about this was the sudden death. In most cases labor has a longer time.

Dr. John R. Uhler thought it was a great pity that some sort of dilatation could not have been employed. He had a device of his own to dilute strictures of the urethra. He inserted any number of knitting-needles and slipped a block of wood as a fulcrum between them and then exerted pressure.

He thought the obstetric forceps could have been applied but not locked, and a block of wood as a fulcrum put between the handles and sufficient pressure used to overcome the contraction.

Dr. J. Edwin Michael suggested that the child would be in the way in Dr. Uhler's procedure, and also the block of wood or fulcrum would have to be as large as, or larger than the child's head, to be effective.

Dr. S. T. Earle had seen one case like this. He was called in consultation about fifteen years ago, and found a young Jewess in labor. She had had two children. She had been in labor two days, and the hand and arm were presenting, and a tight constricting band around the child's abdomen which nothing could pass. He suggested an operation, but nothing was done, and the woman died twenty-four hours later of exhaustion.

Dr. Uhler said he could not understand how contraction could take place after death.

Dr. Miltenberger said there was a considerable amount of life after death. The body does not all die at once.

It is not an uncommon thing to hear of posthumus children and he had often noticed the uterus contract after death, which was due partly to muscular contraction and partly to gas in the intestines. We know that the hair and nails grow after death.

Dr. Michael stated he had seen a uterus entirely removed from the body, contract as late or half an hour after death.

Dr. A. K. Bond asked if ergot had been given in this case and also quinine. On being informed that no ergot had been given and only ten grains of quinine early that morning, he said that it would seem natural to him to suggest cutting, and asked why a long knife could not have been introduced on the finger and the contracting band cut. He spoke of the literature of this subject and the causes of death, and said it looked very much like death from chloroform. He also asked as to the condition of the kidneys.

Dr. H. M. Wilson said he had examined the urine many times and had never found albumen. He did not think his patient died from chloroform, as she came from under its influence and talked quite intelligently. There was no sign of hemorrhage internally.

Dr. Miltenberger spoke of the danger and impossibility of cutting the band of internal muscle. He said if it were even possible to introduce a knife, the slightest cut on such a tense muscle would produce a certain rupture of the uterus and the child would be forced into the abdominal cavity.

Dr. B. B. Browne mentioned a case in his own practice in which a patient who was taking ether very quietly suddenly ceased to breathe. Prompt action restored her.

Dr. Uhler mentioned a case in which the doctor had given but a small amount of chloroform to a strong and apparently healthy man, when suddenly he ceased to breathe and was dead. A post-mortem revealed an aneurism of the abdominal aorta, which had been ruptured in the period of excitement.

Dr. W. C. Van Bibber said it was not always easy to decide when the Cæsarean section should be performed to save life. The profession should be in unison on this point so that in cases we could protect each other against public accusation of malpractice. He performed it once. He was sent for hurriedly and found a pregnant woman at term just dead. He had nothing but a pocket knife with him, but with the permission of the family he performed Cæsarean section with it alone and brought out a living child, which died in about twenty minutes.

Dr. B. B. Browne then exhibited a specimen of diseased tubes and ovaries.

WILLIAM B. CANFIELD,
Reporting Secretary.

Selections.

Fractures of the Femur.

A CLINICAL LECTURE BY HAL. C. WYMAN, M.D., DETROIT, MICHIGAN.

FRACTURES of the femur have been the cause of more controversy among surgeons than any other fractures. There have long been differences of opinion as to the degree of shortening which must necessarily follow a fracture of this bone, some acknowledged surgical authorities declaring that there must always be a shortening after a fracture of the shaft of the femur, while others declare that if the fractured bones are properly adjusted and treated, there need be no shortening whatever. Perhaps both are right. It may be that the character of the fracture has a great deal to do with the result.

I have two cases to show you this morning. The first case, that of a young man twenty-three years of age, who was thrown from a wagon, falling in such a way that two of the wheels passed over his right thigh, producing compound, comminuted fracture of the thigh-bone. By the term compound fracture I mean a fracture in which the soft parts are divided, as well as the bone; and by the term "comminuted," as applied to fractures, I mean a case where the bone is broken into many fragments. It is not fair to presume that a case in which five inches of the shaft of the femur, about its middle, has been ground into fragments beneath the wheels of a wagon running over a hard pavement, would unite without any deformity to the bone. In other words, it is not fair to presume that nature would repair such an extensive injury to the tissues without producing some distortion.

Now, this case was dressed first in the long splint of Liston—sometimes called that of Dessault. This long splint is applied thus: We first put upon the leg an adhesive plaster, in the form of a loop extending under the instep in the form of a stirrup, while the strip extends up on either side of the leg, about a foot. It is held in position by a firm roller bandage. To the loop, or stirrup, portion of the strap, we fasten a piece of one-half inch rubber tubing, which is made taut, and tied through the notches in the end of the long splint, which projects about a foot beyond the foot of the patient. The upper end of the splint is secured in position by a perineal band, which is carefully padded to prevent its excoriating the perineum, against which it exerts counter pressure. Then, through the long splint, fixed in this way, the rubber cord being made taut, extension of any desired degree is maintained. Then a roller bandage is carried loosely around the limb and over the long splint. I forgot to state that before applying the long splint, we first applied what are called coaptation splints, of heavy pasteboard, about fifteen inches long and two inches wide, around the thigh. A series of these, four in number, two on the outer and two on the inner portion of the thigh, were applied over the seat of fracture and were secured by a roller bandage. Previous to this, however, the loose fragments of bone which were likely to spread through the tissues in process of repair, were carefully picked out and removed from the wound with a forceps. Then a drainage-tube was inserted so that all fluids that might accumulate in the wound could be thorougly drained away. The injured member was then enveloped in dried cotton and the coaptation splints and secured with a roller bandage as before mentioned. Plasters were then applied to the leg, and the long splint with the rubber cord and perineal band for extension and counter extension. Care was taken to arrange the dressings in such a way that access is easily had to the wound in the thigh, so that it may be cleaned and kept in a healthy condition. It was intended to make this a permanent dressing. By and by, after a few days, as the inflammatory action subsides, and the reparative processes become more thoroughly established, we will remove these long splints and this perineal band, on account of the inconvenience which it constantly occasions this particular patient. I want to be particular to say that a splint or a system of dressing which is adapted to one fracture may not by any means be adapted to all fractures. This man does not tolerate long splints well; he is restless—nervous under the constant pulling of the elastic cord and the continual pressure of the perineal band. Another man, of different organization, different temperament, might fare differently under the same treatment, and for such a man this might be the best treatment that could be carried out, but in the present case we will change this dressing for the reasons just mentioned, and put the limb in a plaster of Paris bandage, taking pains to have the limb fully extended at the time the bandage is applied, and carrying the plaster well up on to the perineum, having the pressure of cotton so finely adjusted that it will maintain the desired degree of extension throughout the process of cure. We will also, when we come to apply the plaster, make a fenestrum or window through the plaster over the wound in the thigh, through which the dressings may be changed.

At first glance the inexperienced observer might think that the plaster of Paris dressing would not maintain a sufficient degree of extension to prevent shortening while the bone in this case unites. In reply to that idea, I want to say that I do not believe any degree of extension which could be applied to the limb would prevent a certain amount of shortening while new bone was thrown out to fill in the gap caused by the removal of the minute fragments. It is a fact that when bones are carefully divided in experimentation, and are pulled apart so that a considerable interval exists between them, and the muscles which envelop them are carefully divided, so that there is no contractional force, the bony formation which is thrown out to repair the injured bone will not reach sufficiently far beyond the point of fracture to extend or increase of the broken bone. When broken bones unite the tendency is for them to become shorter than before they were broken, and when a bone has been so badly crushed that five inches of its extent is completely broken up, it is only reasonable to expect that a very considerable degree of shortening will be the consequence of the union of the divided bones.

I have already alluded to the use of plaster of Paris dressing, and I want to say simply this: That much art can be acquired in the use of plaster, if the cotton is evenly applied, and cotton should always be applied next to the skin, and a roller bandage should be rolled singly and evenly over that. The plaster may be adjusted with such deftness and firmness and uniformity of pressure that it will be capable of restraining all muscular action. If you think for a moment of the circumstances which occur in muscular contraction, you will realize that with the shortening of a muscle incident to its contraction, it increases its transverse diameter. For example, a muscle like the biceps or quadriceps extensor of the thigh will measure considerably more in its transverse diameter while in a state of contraction than it does in a state of relaxation; and if a plaster of Paris bandage be properly applied, the pressure which will be exerted by it will be so even and uniform that it will produce an increased thickness of the quadriceps extensor and a consequent shortening of the muscle; and without shortening of the muscle there can be no movements of the fractured bones. We have, then, in plaster one of the most important aids in preventing that shortening of broken bones which results from muscular contraction. A great many surgeons apply the plaster of Paris primarily. They will dress all compound fractures with it.

They apply the plaster over all and await the development of symptoms—rise of temperature, quick pulse, pain—to indicate the presence of pus, and then make a fenestrum or hole through the plaster of Paris bandage, by means of which the discharge may escape. But occasionally symptoms indicative of the presence of fluids or the formation of pus are unreliable. The presence of pus is not always indicated by pain, or a rise of temperature; and instances are on record where effusion has painlessly occurred in a limb wrapped in the firm, unyielding plaster of Paris dressing; and with this effusion there has come an obstruction of the circulation which has resulted in gangrene. I have seen a little finger the seat of dry gangrene, as the result of a simple plaster of Paris bandage put on for the purpose of holding in position the bones of the first and second phalanx after they had been reduced because of dislocation. The firm, uniform pressure of the bandage prevents that access of fluids to the parts which is necessary for the repair of the damage. In my judgment, it is better to deter the application of the unyielding dressing until the first swelling has disappeared; until nature has made her first effort to repair the injury. After that, no better dressing can be applied.

Case 2.—This little boy, thirteen years of age, while playing about a barn was struck by the heavy door, which a gust of wind blew from its hinges, producing an oblique fracture of the lower third of the thigh. This fracture, you see, is now dressed with plaster of Paris. The boy, as you will notice, has unusually fine muscular development. The injured limb, as you will also notice, is distorted by a deformity of the lower third of the tibia and fibula. You will notice that the bones of the leg are bent forward. Inquiry reveals the fact that this leg was fractured three years ago, and that subsequent to the union of the fracture the bones began to bend under the weight of the body. As the boy improved in health he used the limb, and it inclined forward in the manner that you see, giving rise to a very serious deformity—a permanent shortening of the limb of a little more than two inches.

At the time the present injury was received a careful examination was made of both the sound and injured femurs, and we judged that there was no congenital defect in either of them. Now, as you look at the plaster dressing, this bulging indicates the lower border of the patella. By comparing it with the patella of the sound limb, we easily decide that there is at present no shortening of the femur; but, owing to the fact that the fracture was oblique, and the line where union must take place widely extended, it would not be strange if the same process of softening should take place in the new tissue thrown out to weld together the broken fragments as took place under similar conditions when the leg was first fractured; and to guard against that we shall keep this limb carefully enveloped in plaster and keep the boy off the limb for several months. We are led to this step because we believe that there is some peculiarity in the boy's disposition or nature which impairs the usual process by which bones are united. No better evidence of the existence of such a peculiarity of organization could be asked for than the deformity which we find in the leg; and when we recall the fact that at the time when the fracture was produced, and subsequently, the most careful surgical appliances, as far as splints and dressings are concerned, and rest in bed were imposed, yet, after the physician had supposed that the bones were firmly united, and the eight weeks' time which commonly elapses before persons with fractures are allowed to use the injured limbs had elapsed, and the patient had begun to walk upon it, then the softening seemed to take place and the bone began to bend forward, producing the deformity which you see. In this case, too, a long splint was used for several days, not for the same reasons that it was used in the other case, but for fear that the unusual muscular development which you see that this patient enjoys might become excited, and disturb the rest of the broken fragments after they had been carefully adjusted. However, as soon as a few days had elapsed and we found that the boy had good control of his muscular system, and that there was very little twitching or jerking of the muscles of the thigh, we took off the firm splint and applied the plaster which you see.

These two cases serve well to illustrate the fact that fractures seldom heal and make the limb as good as it was in the first place. They show, too, that change may take place in a bone which has been broken long after it is supposed to be sound and unyielding. These changes may be so little in character that ordinary surgical skill will not detect them, and when they occur the surgeon should not be held responsible. A green stick fracture of the leg is sometimes mistaken for no fracture, and the patient sometimes gets a deformity in consequence of walking on the broken leg too soon ; but in the case of the boy I have just shown you, the history shows that he had a simple transverse fracture, and that the deformity was due to conditions which developed after the repair was supposed to be complete.

CONCLUSIONS.

1. Fractures of femur may heal without shortening, but are not likely to.
2. Always turn the toe a little in when dressing a broken femur, because of the great tendency to eversion of the toe after fractures of the thigh.
3. Don't forget when using plaster apparatus that the even pressure causes wasting of the limb, a shrinkage which permits movement of the broken bones inside the plaster cast.
4. Guard against shrinkage by removing the cast or cutting it open lengthwise, filling with cotton and tying it tighter.—*Med. Age.*

Chicago Pathological Society.

Stated meeting October 16, President I. N. Danforth, M.D., in the chair.

The session opened with a discussion on Prof. Lydston's paper, "Syphiloma of the Tongue," which was read at a previous meeting.

The President said that a section of the specimen showed it to be a mixed sarcoma, with no indicatious of malignancy.

Dr. Wescott asked what Dr. Lydston based his opinion upon in believing that the growth was cancerous.

Dr. Copeland said that from the general appearances of the growth Dr. Lydston thought it might have degenerated into cancer.

Dr. W. H. Hayman asked whether such a growh ever became malignant.

The President replied, "Yes; when it changes its cell type. It then becomes atypical."

Prof. A. E. Hoadley had not heard or read the paper; but the degeneration of such a growth from a benign to a malignant condition, he said, is not regarded as being well proven—that is, assuming that there are embryonal tissue-elements in the make-up of a malignant tumor. It is believed now that there is no such thing as a syphiloma ever becoming a carcinoma, or an epithelioma ever developing flat or spindle-shaped cells without the spindle-shaped cells originally existed as a basis for the development of the tumor. A syphiloma, however, might be an exciting cause for the development of carcinoma, but if it exists without the primitive embryonal cell-structures, it can never degenerate into a malignant tumor. This is yet a question in the minds of the profession.

The committee, composed of Drs. Dion, W. H. Hayman, and J. J. M. Angear, previously appointed to examine the literature on the subject of superfœtation, and to report on Dr. Murdock's case, reported conjointly as follows:

Churchill concludes:

1. That the theory of superfœtation is unnecessary to explain the birth of a mature fœtus and blighted ovum; of a mature and immature fœtus, born together or within a month of each other, or of fœtuses of different colors, as they may reasonably be supposed to be the product of one act of generation, or of two nearly contemporaneous.

2. That in cases of double uterus it is possible for a second conception to take place, and (judging from the subsequent birth of the second child, in the only case on record) at a later period than the first.

3. That in the remaining cases, where one mature child succeeded the birth of another after a considerable interval, we have no proof of a double uterus in any, and positive proof that in one case it was single, and that to the explana-

tion of these cases no theory as yet advanced is adequate; that of superfœtation being opposed by physical difficulties, insurmountable in our present knowledge.

Simpson, Duncan, Tyler Smith, and others, deny that fecundation is prevented by the condition of the uterus in the early months of gestation. Tyler Smith has shown the mucous plug to be different only in quantity and not in kind to that which occupies the cervix in the unimpregnated state, and will not prevent passage of spermatozoa. Neither does any obstacle occur to the passage of a second ovum when the uterus is already occupied by one. Inasmuch as neither of the layers of the decidua in the first month of pregnancy pass over the orifices of the Fallopian tubes or cervical canal, until the third month, the ovum with its envelopes is attached to a small portion only of one of the parietes of the uterus, leaving every other portion of the decidua vera free for the reception and development of a second ovum. "The infrequency depends," says Tyler Smith, "upon the absence of perfect ovulation during pregnancy, and not to mechanical impediment."

Playfair quotes Bonnar's case from the British peerage, in which a child was born September 12, 1849, and the mother gave birth to another January 24, 1850, an interval of 127 days. Subtracting fourteen days, which Dr. Bonnar assumes to be the earliest possible period at which a fresh impregnation can occur after delivery, the gestation is reduced to 113 days—less than four calendar months. As both survived, the second child could not possibly have been the result of a fresh impregnation after the birth of the first; nor could the first have been a twin prematurely delivered, for if so, it must have only reached a little more than the fifth month and would not have lived.

Cazeau, in 1853, obtained a placenta from a woman who was delivered at full term of a fully-developed child. It had two amniotic bags; one belonged to the living child and presented no unusual appearances; the other, much smaller, contained barely a trace of fluid, but a mummified fœtus the size of one of four months' development. The dead fœtus may irritate the uterus, bring on contractions, and be expelled, the other remaining to full development.

Hamilton (1792) says: "Soon after impregnation the uterine orifices become entirely clogged up by a thick, viscid gelatine. The internal cavity is also lined by the external membrane of the ovum, which attaches itself to the whole internal surface of the womb. The Fallopian tubes also become flaccid, and, as gestation advances, are removed from the ovaries and can not convey the ovum. From these and other reasons the doctrine of superfœtation is now generally exploded."

Burton (1751) attended a woman who, in two subsequent pregnancies, had the remains of a fœtus and integuments attached to the placenta.

Glison reports the case of an Indian woman, of Brazil, who gave birth within short periods to an European, an Indian, and an African child, and says the second child must be born three months later than the first in order to be called superfœtation.

Barnes says physiologists must first prove that ovulation takes place during pregnancy, before the doctrine of superfœtation can be substantiated.

Ross, of Brighton, reports a case (*The Lancet* August, 1871,) in which a patient miscarried of twins on July 16, 1870. Fifteen weeks later, October 31, she was delivered of a healthy child; but this case was one of double uterus, each side of which had been impregnated. The patient had given birth to six children at term, nothing remarkable having been observed in her labors.

Eisemann reports the case of a woman who was delivered of a second child 140 days after the first, both having been mature.

Moseley, in his work on "Tropical Diseases," reports a case of a negro woman who was delivered of two children at one birth—one negro, the other mulatto. She told the physician attending her that a white man on the estate was the father of the mulatto. Cases of the same kind and in the same circumstances have been published by Bouillon, Dewees, Crotti, Guerarde, Dunglison.

Desgranges, of Lyons, speaks of a woman who was delivered on January 20, 1780, of a seven months' fœtus, and on July 6, 1780, five months and sixteen days later than the former birth, she was delivered of a second child which had apparently reached its full time.

Bigard, of Strasburg, reports the case of a woman, aged 37, who was delivered of a lively child on the 30th of April; the lochia and milk were soon suppressed. On the 17th of September of the same year (year not mentioned), about four and a half months after the first delivery, she brought forth a second apparently mature and healthy child. On the death of the woman the uterus was found to be single.

Maton reports the case of an Italian lady, married to an Englishman, who was delivered of a male child at Palermo, November 12, 1807. On the 28th of February, 1808, not quite three calendar months after the preceding accouchment, she was delivered of a second male child. Other similar cases are quoted by Beck, Velpeau, and Cuming.

Madame Boivin reports a case of a woman, aged 40, who gave birth to a female child on the 15th of March, 1810, weighing about four pounds. As the abdomen remained large, Mde. Boivin introduced her hand, but could find nothing in the uterus; her examination led her to suspect that there was another fœtus, either extra-uterine, or contained in a second cavity in the womb. On the 12th of May, of the same year, a second female infant was born, weighing not more than three pounds, feeble and scarcely able to live.

Buffon reports a case of a female at Charleston, South Carolina, who was delivered in 1714 of twins, within a very short time of each other. One of those was black, the other white. This circumstance led to an inquiry, when the woman confessed that on a particular day, immediately after her husband had left his bed, a negro entered her room and compelled her to gratify his wishes, under threats of murdering her. The second copulation took place immediately after the first.

The above case is selected to illustrate the subject of super-fecundation or super-conception, but it is erroneously reported as one of superfœtation.

Many of the cases reported as cases of superfœtation are not proven to be such beyond a doubt. Some are not well reported, showing great carelessness on the part of the reporter by omitting to state important points. The following are a few cases which resemble more or less the case which was reported by Dr. Murdock.

Dr. Cairns exhibited to the Obstetrical Society of Edinburgh, June 9, 1869, a beautiful specimen of a blighted twin which had been removed from a patient immediately before the birth of a living child at full term. The blighted fœtus had been arrested in its development, molded into the form of the uterine walls, and retained, but owing to the membranes being entire it had not become putrid (Ed. *Med. Journal*, August, 1869).

Dr. Flecken relates a case in which a powerful woman was delivered of a strong living and full-timed child. After the expulsion of a very large placenta, another compact, fleshy placenta in partial connection with the former, followed. The accompanying membranes contained a six months' fœtus, the body of which had been compressed so flat that the broadest part of the cranial and thoracic region did not exceed five lines. The bones of the cranium lay separated from each other, the nasal bones projected as sharp points, and the broken malar bones penetrated the skin. While in the sixth month of her pregnancy the woman had fallen down stairs (*Med. Times and Gazette* March, 1862).

Dr. Picket, of Great Barrington, Massachusetts, relates the following case, which is of some interest in medical jurisprudence: I was called to Mrs. R., of Stockbridge, whom I found in labor, which lasted about six hours. This, for her, was rather severe, but she was safely delivered of a large, healthy child, apparently at full time. While examining for the placenta, I discovered something had apparently ossified. The placenta soon passed off, and with it this apparently foreign substance, which proved to be a dead and partially decomposed fœtus, of about four months.

Dr. Wilson reports the following case to the Glasgow Medical Society: Mrs. T., on the 21st of November last, was delivered of a living child. She menstruated for the last time about the beginning of March. When three months or thereabouts advanced in her pregnancy, she had twice in succession a considerable sanguineous discharge per vaginam accompanied with slight uterine pains. She, however, paid little attention to these symptoms at the time, as they did not occasion any anxiety or alarm. The placenta on examination seemed generally healthy, with the exception of a few small indurated points of a tuberculous character, scattered over various parts of its extent. Toward the margin of the placenta was found a small fœtus closely enveloped in a yellowish fat-like mass, which lay in a groove or sulcus formed in the placenta by the overlapping or bulging over of a portion of the fœtal surface. There can be no doubt, I think, this was primarily a case of twin conception, while one was blighted at or near the third month, and the other carried to the eighth, when both were nearly simultaneously explled from the uterus.

In the *British and Foreign Medico-Chirurgical Review* for October, 1854, Dr. Thielman relates the following case of superfœtation: In July, 1852, a peasant woman became pregnant the third time; menstruation appeared twice after conception. On the 26th of March, 1853, the pains appeared, and the next morning she was delivered of a girl, small, but living; the after-birth came away normally. The lochia ceased in a few hours. The secretion of milk was so scanty that the child could cot be supported by it. Eight days after delivery the woman returned to her household duties, but she felt the movements of a second child in her left side. On the 18th of May, that is, fifty days after the birth of the first child, pains came on, and the birth of a second girl, somewhat smaller, followed. From this time the secretion of milk went on so freely that both children derived sufficient nourishment.

Dr. Atchinson communicated to the Obstetrical Society of Edinburg a case which is supposed to be an instance of superfœtation. The subject of the case was a well-formed woman, aged 30, who had been born and brought up in India, had born two children at full period of gestation, and then followed two miscarriages; had lately been suffering a good deal from fever; her general health not good at present; system much relaxed from debility, caused chiefly by the prevalent great heat of the season. On examination I found that after a short and easy labor the child was born and the placenta discharged. The uterus was fairly contracted. On examining the child I found it to be a case of premature birth at the seventh month, which corresponded with the mother's statement. The child did not survive over a few hours. I then examined the placenta, to which, much to my astonishment, was attached a large sac. This, on closer inspection, proved to be another set of membranes in an entire state, containing another fœtus; the placenta of this last being incorporated into that of the first-born fœtus, much smaller, but with a distinct mark of union till existing. At one point the membrane of both the fœti were inseparably united, and those of the smaller fœtus were much more dense in structure and less transparent than those of the larger fœtus. The fœtus contained in the sac (which was not opened) seemed from its size and development to have completed nearly its. fourth month of uterogestation.

Dr. Angear, after quoting at great length the literature upon superfœtation, closed by saying: We have found no recorded cases precisely like that of Dr. Murdock, but several similar In Dr. Murdock's case let us suppose that the blighted fœtus had not been found, then all who know anything of the case would have said that there had been an abortion, or that there had been no conception previous to the present gestation. Suppose, again, that we had never known anything about the symptoms of a miscarriage, and the blighted fœtus had been found, then we should have come to the conclusion that it was simply a case of twins with one of the fœti dying early in fœtal life and retained several months in utero as in the examples given above. The evidence that there had been miscarriage is not positive. It is simply negative. No one saw any fœtus; therefore what positive evidence is there of a miscarriage; but does that prove that there was no miscarriage? If taken for granted that there was a miscarriage, than we have a case of double conception or super-conception (not superfœtation), or twins, with one of the fœti blighted and retained in utero and expelled with the living and viable child.

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THE TIME OF COMMENCEMENT OF MENSTRUATION.—Dr. Sullies finds from inquiries made from 3,000 pregnant women from the neighborhood of Königsberg that menstruation commenced at the age of 16. The taller and the weaker girls menstruated earlier than the shorter and stronger girls, and the brunettes earlier than the blondes. The earliest of all were the tall, weakly blondes; the latest, the short brunettes of medium strength. In 83 per cent. the function was performed regularly at the first.—*London Lancet.*

TREATMENT OF ASCITES BY FARADIZATION.—The treatment of ascites by faradization was recommended by Tripier in 1861, but Solfanelli, in 1866, was the first to report a favorable result from such treatment. The case was one of cirrhosis of the liver, and every means had been tried in vain to effect the removal of the fluid by increased diuresis. An increased excretion of urine was noted after the first application of electricity, and after four séances the ascite had entirely disappeared. As the casual hepatic condition remained unchanged, however, the fluid quickly reaccumulated. Dr. Muret has recently reported two cases of ascites, one following tubercular peritonitis and the other an enlarged spleen. In both cases a complete, though temporary, disappearance of the ascites was obtained by faradization.—*Der Fortschritt*, No. xx., 1888.

The Cold Bath in Fevers.

Ed. Canada Lancet, October:—The use of the cold bath, wet pack, or sponge, in abstracting heat from the body in fever, is generally looked upon as a recent therapeutic measure, and so indeed it is, if we regard the number of cases so treated; though the method has been known and written about since the beginning of the present century at least. Thus, as early as 1812, typhoid fever was treated by Récamier, in the Hotel Dieu, Paris, by the cold bath pure and simple, the patients being kept from fifteen to twenty minutes—two or three times a day—in a bath from 68° to 70° F. All along from that time to the present, pamphlets and small works have been issued on the subject, the whole showing of which seems to be that the mechanical abstraction of heat is a very valuable therapeutic procedure in cases of high temperature. In Germany, this method has been generally adopted for the past fifteen or twenty years. In England and America, the cold bath system proper has not been put into anything like general practice; while in France, the hospitals at Lyons are the only ones where the treatment is carried out as a system.

"Prolonged high temperature kills," not, it is believed, so much by the actual presence of increased heat itself, as by the greatly increased activity of the phenomena of the vital chemistry, upon which this heat depends. If this be true, and it seems to have been clearly demonstrated as true, then the aim should be, not so much to abstract heat, as to check its production.

From a series of observations made by the French scientists, Fredericq and Minquand, it has been shown that the application of cold to the surface "markedly augments the absorption of oxygen and production of carbonic acid, and consequently the production of heat."

This theory, namely the increase of "interstitial combustion under the influence of cold to the surface," is held by Liebermeister also, and is so stated by Niemeyer.

It would appear, then, that by applying cold, we really increase thermogenesis in the "heat producing area" of Rosenthal, while we are abstracting it from his "heat losing area." This can not be correct treatment, scientifically; for it is simply taxing the power of the patient still further than is already being done by the disease. Certainly a high temperature which is remittent, is "better supported than a low temperature which is continuous," and it is our duty to obtain remissions if possible. But if it be true that, by the cold bath treatment, we are increasing histogenesis and consequently heat, it were surely better to rely upon some of the chemical antipyretics, as quinine, antipyrin, or antifebrine. They give remissions of temperature, husband the patient's strength and check alterations in the tissues, such as fatty degeneration dependent upon high temperature, and slow the heart, thus improving the nutrition of the muscular walls of that organ.

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To Prevent Feet Sweating and Swelling.—In the German army the soldiers are furnished with a powder called *Fusztreupulver*, foot powder, which they are instructed to sift inside and outside their socks, and the use of which effectually prevents sore feet by keeping them dry and free from chafes. Those classes who are constantly on their feet should make a note of this. The powder consists of 3 parts salicylic acid, 10 parts starch and 87 parts finely powdered soapstone.—*American Druggist.*

The Constant Current in Epilepsy.—Dr. Niemeyer has obtained some successful results in epilepsy by combining the employment of the constant current to the brain in combination with the internal use of small doses of bromide of potassium. The anode was moved about over the forehead, the cathode being held in the hand; or the anode was fixed on the nape of the neck, while the cathode was moved over the forehead, or applied immovably over the gyri centrales of both sides. The treatment was carried out for ten months, the result being that one patient had no attack for two years and three months; another, who had previously had an attack about every month, had, after treatment, only two fits in twenty-five months; and a third patient, who had been in the habit of having three or four fits a day, remained free for seven weeks.—*Lancet*, October 13, 1888.

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Supplementary Report of the Use of Salol in Typhoid Fever.

BY R. H. DAY, M.D., OF BATON ROUGE, LA.

In the last days of September, 1888, I was called to see a patient suffering from typhoid fever, and I was led by some recent studies of the composition and therapeutic effects of salol to give it a trial in the case before me. I did so, and with such prompt and decided success, that I deemed it my professional duty to report my experience at once to the medical profession. To this end I wrote up a report of the case for the *Journal of the American Medical Association*, and in the latter part of October forwarded it to the editor, requesting its early publication. The editor kindly accepted the article, and wrote me it would be printed as soon as it could be done in justice to other contributors.

Unfortunately, perhaps, the publication, of my article was long postponed, owing to the many excellent papers on the *Journal's* file ahead of mine; yet this delay enables me to contribute this supplementary report of a case similar in character to the first, and occurring in the same individual.

Willie Thomas, col., æt. 17, whom I discharged cured on the 3d of October, 1878, after going about for about four weeks in apparent good health, except being weak, was again stricken down on the 30th of November.

On the 3d of December I was again requested to see him. I found him lying on his back, his skin hot and dry, tongue coated dark brown, fissured and without the slightest moisture; front teeth, gums and lips coated with sordes; intellect dull and mind wandering, with muttering incoherency when dozing and frequently when awake; thin, dark, offensive stools four or five times in the twenty-four hours; urine scanty with considerable sediment, upon standing, of a pinkish and brick-dust color; abdomen more retracted than otherwise, with a sense of soreness upon gentle pressure over the whole abdominal region; no relish for food since his second attack. His pulse was very small, weak and up to 130 per minute, temperature 103.4°.

It was now just two calendar months since I discharged him cured of typhoid fever, and I recognized now the same disease, and, having had such good results from salol in his previous sickness, I determined at once to give it another trial. Accordingly I prescribed 5 grs. of salol every three hours, and no other medicine to be given, that I might test salol upon its own therapeutic merits. I also directed the liberal use of port wine, Ducro's elixir, and cow's milk with beef broth.

Two days subsequently I visited my patient and took with me my friend, Dr. J. W. Dupree, to whom I had narrated his previous sickness and the success I had experienced in treating him with salol. Upon seeing the patient Dr. Dupree unhesitatingly pronounced the case typhoid fever, and thought him dangerously ill, though I thought I could perceive some amelioration since my previous visit.

I continued the salol and kept up the nourishment, telling the mother if he ceased to improve, or she should observe any symptoms of his growing worse, to let me know immediately. Suffice it to say that I saw my patient every few days for the next ten days, and each time with marked improvement, after which I discontinued my visits, leaving him convalescent and needing only good food to establish his returning good health.

This is the second case of typical typhoid fever in which I have given salol with eminent success; in this last case, not so prompt as in the first, which perhaps is easily explained by reason of the general impairment of his physical system by his previous sickness; but even in this last case I could discern in forty-eight hours the commencement of a salutary work. And in this last case salol alone was used, and to it, and to no other drug, belongs whatever good results were accomplished.

Now, in what manner salol acts upon the human organization to exercise such a curative power in typhoid fever, it is too recent before medical observers and workers, and its trials too few, to lay down any reliable theory.

But with my limited experience of its use, I would by no means restrict its application to the treatment of typhoid fever, for since I have commenced its use, I have repeatedly given it in the diarrhœas and dysenteries of infants and children with the best results, and in the first week of January of this year, in an adult white male, Mr. E. T., attacked with *ilieitis*, having frequent and copious bloody watery stools, fever and great pain, prostration and soreness over the bowels, I used salol 5 gr. with pulv. ext. opii. ½ gr. every two to four hours, with prompt relief, and an established convalescence in forty-eight hours.

Judging, then, from my short but sharp experience, it appears to be suitable and useful in inflammations of the mucous coat, glands and follicles of the intestinal tract, upon which it appears to exert a prompt and peculiar beneficial influence.

Further observation and trial, and rigid scientific research, must be instituted before the merits of this new claimant to the confidence of the medical profession can be fully established, and its true therapeutic value and range of application can be definitely settled and be made of practical value to the medical profession.

Since the foregoing thoughts were written, I have read in the January number (1889) of *Gaillard's Medical Journal* a most valuable paper by Dr. W. A. Cauldwell, of Chicago, on the "Rational Selection of the Salts of Salicylic Acid for Therapeusis," taken from the *American Medical Digest.* I find in this paper many valuable suggestions relating to the rational use of salol in medicine, and that very favorable reports are made of its administration in diarrhœa by Dr. O. I. Osborne; and that Dr. James Barnsfather reports good results of its use in typhoid fever.—*The Journal.*

Microscopy.

Cheap Microscopes.—Several years ago there was a general complaint that American makers of microscopes charged very much more for their work than the same kind of work could be purchased in Europe. There are no grounds, however, now for such complaints. As cheap microscopes, and of much better quality, are made in this country as are manufactured in Europe. When a good American instrument can be bought for from $25 to $32, it seems to us that everything in the way of cheapness has been accomplished. Just think of a microscope, the quarter inch of which will resolve pleurosigma angulatum, made in this country and sold for $26.

Bacteriology of Snow.—In the *Vratch*, No. 37, 1888, p. 727, Dr. F. G. Ianovsky, of Kiev, published an able account of his bacteriosopic researches concerning snow, and carried out in Prof K. G. Tritshel's laboratory in February, 1888. His main results may be condensed as follows: 1°. Snow is proven to contain considerable, though varying, numbers of different microbes—and that even when collected and examined just after its fall (that is, when caught in a sterilized vessel at the moment it reaches the ground). 2°. The numbers, however, are by far less than those of microbes detected in ice. 3°. A certain, relatively smaller, proportion of the bacteria is derived from aqueous vapors transformed into snow, while the remaining microbes are probably brought down by snowflakes on their passage through the air. 4°. A more or less prolonged exposure to a low temperature seems to have no marked destructive action on the microbes present in snow. At least, 1 cub. cent. of the snow which had been lying 3 days at—16° C., was still found to contain as many as 228 bacteria. [Nevertheless, Dr. T. Mitchell Prudden states that an intense cold gradually destroys microbes in ice.] 5°. Several species of micro-organisms are met with in snow, some of which liquify gelatin, and others do not. 6°. As a rule, quite recent snow contains considerable quantities of microbes which liquify gelatin, while an older one is either wholly free from them, or contains them only in very scanty numbers. 7°. The following three species of micro-organisms are most commonly met with, and in greatest numbers: *a.* large oval diplococci, liquifying gelatin on the third day, in the shape of a funnel-like sac, with a whitish flocculent precipitate at the bottom, while the colonies in the beginning have a greenish tint, the microbes possessing an energetic motion; *b.* similarly very mobile small cocci, not liquifying gelatin, and slowly growing along the needle's track, the growth being rather linear and consisting of grayish-white, minute, punctiform colonies; *c.* very large cocci, liquifying gelatin, but strikingly slowly (by the end of three weeks) and growing along the needle's track in the shape of a sharply-circumscribed linear streak of a beautiful pink color, with a superficial, prominent, circular rosy patch. The species *a* and *b* are met as commonly in the water of the river Dnieper, while the pink coccus is said to occur only in snow.

YELLOW FEVER GERM.—A dispatch from Columbus, O., in the *Baltimore Sun*, says: "Professor H. J. Detmers, of the Ohio State University, has concluded the task of photographing the yellow fever germs that had been sent to him by Dr. James E. Reeves, of Chattanooga, Tenn. The professor says this is the first time that yellow fever germs have been found in the tissue, scientists heretofore searching for them in vain. They have been found in zooglœa masses in the capillary blood vessels, which appear distended and ruptured, and at these ruptures these zooglœa masses are dense and large. The bacilli present themselves in four forms; the first in a plain, dark, round mass; the second an oval, with a dark point at each extremity; the third, an oblong disc with dark points, as in the second, and fourth, two darks united by a film, and strikingly resembling a dumb-bell. Being asked as to how the discovery regarding the cause of the yellow fever came to be made, he said: 'Dr. Sternberg, of Johns Hopkins University, for a number of years has made exhaustive searches for the yellow fever germs, but without success, in the tissues. During the last epidemic he made several post-mortem examinations at Decatur, Ala. Liver and kidney tissue of two persons at least were sent by him to Dr. Reeves, for the purpose of mounting for microscopical purposes. I have several negatives, each of which is good. Some show the bacteria singly, others in masses with the capillaries distended with them.'

"Dr. George M. Sternberg is a surgeon in the United States army, and is doing his laboratory work in Baltimore, at the Johns Hopkins University. He has been engaged during the past two years in investigating yellow fever, under orders from the President of the United States, and in compliance with an Act of Congress, making an appropriation for this purpose. Last year he visited Brazil and Mexico in the prosecution of his investigations. He also went to Havana, and in the autumn to Decatur, Ala., for the same purpose."

Gleanings.

Gonorrhœa in the Female.—This was the subject of the evening at a recent meeting of the Cincinnati Academy of Medicine. In the discussion, Dr. E. S. McKee considered this disease, owing to the anatomy of the parts, of much less importance than the remarks of some of the gentlemen would have us believe. He thought the disease much more serious to the female's male friends than to herself. In fact, many women go through the disease and do not know they have it. A better understanding of its nature and pathology has greatly simplified the treatment of gonorrhœa. The remedies employed a few years ago were numerous and confusing. Keep the parts clean with daily vaginal hot water irrigations, restrict the diet, insist on moderate exercise in the bracing air, avoidance of excitement, and gonorrhœa will get well about as quickly without medicines as with them. A 2 per cent. solution of nitrate of silver painted to the parts is very good, and a deadly foe to the gonococcus. If the disease tends to recur, as it often does, owing to its remaining latent in the duct of the vulvo-vaginal gland, an injection of a 2 per cent. to 5 per cent. solution of nitrate of silver does well. This is a difficult procedure, but can be done with a fine needle. The knife used by the ophthalmologists in slitting the duct of the lachrymal gland is a very good instrument to insert into the duct and lay the gland open, when it can be more thoroughly treated. This disease will remain latent in some cases and be brought out again by the resumption of intercourse. This has been noticed to occur in widows who contracted gonorrhœa from the first husband, which apparently disappeared after his death. The gonorrhœa was called out again by the excesses of the first pleasures and given to the second husband. This fact has doubtless been long known, as it is stated on good authority that this was the unwritten part of the information given by Mr. Weller to his own Sammy, concerning widows. In French literature we find statements of young couples suffering from idiopathic gonorrhœa after a night of oft-repeated sexual intercourse, stimulated by much wine. This, probably, was a non-specific catarrh of the mucous membranes. A question of great importance is the frequency with which sterility results in women after gonorrhœa. This is not strictly true, although the number who bear children under these conditions is doubtless small.

ON THE TREATMENT OF HICCOUGH.—In the *Allgemeine Medizinische Central-Zeitung*, August 8, 1888, Dr. Pensky asserts (on the ground of his experience of about twenty years' duration) that hiccough can be infallibly and momentarily arrested by the following procedure: The patient should stand erect with his arms abducted from the body up to a horizontal level. The doctor (or anybody) places himself face to face with the patient and compresses his radial arteries, while a third person makes the patient swallow slowly, but steadily (without any interruption) a tumblerful of water. Referring to Dr. Pensky's method, Mr. G. Güshtchin draws attention to the fact (*Vratch*, No. 37, 1888, p. 739) that hiccough, however severe or obstinate, can be swiftly stopped by a much less troublesome and fussy procedure, and one practiced by the Russian peasantry from time immemorial. It consists in making rapid and deep inspirations, alternating with very slow and deep expirations. The author employs this simple means with uniform success in all cases he happens to meet.

PROF. KARL BRAUN in his Vienna clinic treats cases of puerperal septicemia where there is chill accompanied by tenderness in the hypogastric region, and a rise of temperature 102° or over, as follows: The patient lies on her left side; the speculum is introduced, and the cervix drawn down by a tenaculum. An intra-uterine irrigation of thymol 1:1000 is given, and then the interior of the uterus is thoroughly curetted, and the intra-uterine injection then repeated. A suppository of five grains of iodoform is then inserted into the uterus; diphtheritic patches on lips of cervix are scraped and painted with tincture of idodine and the vagina packed with iodoform gauze, which is removed after twenty-four hours, and vaginal injections of thymol given every day as long as there is any discharge.—*Dr. Doe, in Boston Med. and Surg. Journal.*

NORDMANN: STATISTICS AND TREATMENT OF PLACENTA PREVIA (ARCHIV. OF GYN., XXXII., 1) —The aim of this paper is to solve the question as to whether the preferable method of treatment is by combined version and slow extraction. Forty-five cases occurring at the Dresden clinic, in a total of 5,779 labors, are utilized. Twelve cases were treated by tampon or colpeurynter, with or without rupture of the membranes, a delivery being allowed to take place spontaneously, with a maternal mortality of 0 per cent. and an infantile of 16.6 per cent., excluding the cases where the fœtus was dead when first seen. In twenty-three cases version was performed, followed by immediate extraction, the maternal mortality being 17.3 per cent. and the infantile 5.8 per cent., excluding cases where the fœtal heart was never heard. In six cases version and slow extraction was the method of treatment, one mother dying of sepsis and all the children being delivered dead. Although these data decidedly speak in favor of the first method of treatment it should be noted that in all the cases so treated there was marginal insertion of the placenta, an insertion which does not expose the mother to the same risk as the total insertion. By the second method the greatest number of children were saved. N. concludes that this method is preferable in hospital practice, whilst in private practice version and slow extraction should be the rule, notwithstanding the excessive infantile mortality. In case of placenta previa marginalis the tampon will answer well both from the standpoint of the mother and child.—*American Journal of Obstetrics.*

INJECTIONS OF WARM WATER IN EPITHELIOMA OF THE CERVIX.—De Tornery draws the following conclusions:

1. Injections of warm water at 102.2° to 104° F., for about half an hour, twice a day, morning and evening, disinfect the vagina, clense it, and considerably diminish the ichorous discharge.
2. These injections diminish the loss of blood, and improve the general health.
3. In the majority of cases the pains are diminished, so that there is less need of injection of morphine.—*France Medicale*, No. 89, 1888.

THE TREATMENT OF ACUTE CORYZA.—An acute coryza of common cold is such a common affection that few persons think of applying for relief until it has so far advanced as to be difficult to treat; and even at its incipiency it can only be cut short by strict and close confinement to one room with closed doors—a thing to which very few will and can submit. The result is that the laity say a cold is incurable.

Dr. Frank Hamilton Potter in discussing this subject in the *Buffalo Medical and Surgical Journal* for January, very properly divides the treatment into preventive and remedial measures. He says "the majority of colds need not occur even in uncertain and changing climates like ours, if people would understand and practice a few simple hygienic precautions." As the first preventive measure he suggests sleeping with closed windows when the external temperature is below 65° F. This would startle many lovers of fresh air, and well it might, especially as he takes as patterns the people of Europe, and the lower animals—ranking both together as equally intelligent on this subject. The people of any country where the cold is extreme and fuel expensive, often try to keep warm from the heat of their own bodies assisted by a little fuel, by keeping all openings in rooms closed, stuffing up cracks with paper, weather strips, etc., and dressing heavily. Any physician who has visited the poorer of this city has not failed to notice, especially in the home of the foreign-born or native African, ill-smelling rooms, heated by excluding air and crowding.

The great point which even the more intelligent seem to forget is that *fresh air is not necessarily cold air*, and that a sleeping-room can be warm and at the same time be thoroughly ventilated. An open fire place or a window let down from the top, away from the bed, or both; or a room slightly heated, with an open window in the coldest weather will be sufficiently ventilated. To many persons sleeping in a closed room as described by Dr. Potter, a dull headache would be the result next morning. His advice as to a cold bath quickly taken in a warm room is excellent for a robust person. The person who keeps up a good skin action will not be compelled to close the window on cold nights. His remarks on the use and abuse of the sealskin sacque and neck-scarf are very much to the point.

The therapeutical measures can rarely be carried out as directed unless the patient be the physician himself or one of his family who is near him. All others call medical aid after the cold is at its height.

Dr. Potter has done excellent work on even such a trite subject, and if more attention were paid to such common ailments by observing physicians, trifling but very annoying maladies would yield the sooner to treatment and the profession would have more gratitude from suffering humanity for the good work than for the discovery of many bacilli.—*Maryland Med. News.*

DISEASES OF NERVOUS SYSTEM AND TROPHIC LESIONS.—The question of the relation between trophic lesion and diseases of the nervous system, excluding changes within the central nervous system itself, is one which is not only of the highest interest but one whose solution will carry with it suggestions of the highest importance from a therapeutic point of view. Dr. E. C. Seguin has taken this into consideration (*Journal of Nervous and Mental Disease*), and from his researches upon this subject he ventures to suggest that "disease of the nervous system produces true tropic lesions when it interferes with the associated or inter-dependent life of continuous tissues."—*St. Louis Med. and Sur. Journal.*

HEPATIC INSUFFICIENCY.—Dr. E. Jeanselme states, in *Gazette des Hôpitaux*, that hepatic insufficiency is a symtom, the result of some functional trouble or of a structural alteration of hepatic cells, manifesting itself by a temporary or permanent change, or suppression, of the hepatic functions. The less comprehensive term acholia is frequently employed to express hepatic insufficiency. In the same manner that uremia is the common termination of renal affections, and asystolia that of heart troubles, so is hepatic insufficiency the almost inevitable termination of many diseases, particularly of those of the liver. The fundamental characteristics of this symptom remain always the same, but they may be partially masked by the causative disease. From this their result three principal phases. When it is the result of a chronic trouble it is, so to speak, latent and must be looked for. In infectious diseases it is, to a great degree, masked by the grave symptoms of the disease causing it. In hepatic diseases, on the other hand, this insufficiency forms a prominent symptom which can be studied independently of the condition causing it.—*St. Louis Med. and Sur. Journal.*

NATURE AND ORIGIN OF TETANUS.—At the séance of Oct. 30, of the Académie de Médecine, M. Verneuil read a report on the two communications to the Académie which had been referred to him. The one was by M. Berger on the transmissibillity of the disease from man to man, and the other by M. Richelot on the infectious nature of tetanus. Reserving his remarks on the papers for their discussion at a future time, the reporter said that the inter-human transmissibility of the disease, the principle of which could scarcely be contested, as yet rests upon a few reported cases only, and by but few facts. Transmission would seem from what had thus far been observed, to be by contact, direct or indirect, only, and not through atmospheric infection. Not a single fact or observation could be adduced in support of the latter method of transmission, while the former is supported by a number of clinical observations. It is, however, frequently very difficult to specify the exact intermediary or vehicle of transmission between the first tetanic and those infected by or from him. This line of research is one that, in the opinion of the reporter, should be persued with the greatest zeal in order that the mode of extension, rare though it be, might be discovered and suppressed.—*St. Louis Med. and Sur. Journal.*

LEUCORRHŒA IN CHILDREN.—In these cases, according to the *College and Clinical Record*, Dr. Parvin recommends pencils of iodoform containing three or four grains each, to be introduced into the vagina. Of course, this is in cases where injections can not be used; or the following solution may be dropped between the labia:

℞ Argenti nitratis, ...	gr. v.
Aquæ, ...	℥i.

M. et ft. sol.

GONORRHŒA IN WOMAN.—In a study of this subject by M. Herard (*Lyon Medical*) the following interesting statistics are given. In 483 women it was found that the disease was localized as follows:

Urethra	114
Vagina	7
Glands of Bartholini	2
Uterus	1
Anus	1

The vagina is the most frequently attacked in little girls, the urethra in woman. While gonorrhœa may limit itself to the mucous membrane of a single organ, it most frequently attacks several at one time.

DOUBLE PLACENTA IN SINGLE PREGNANCY.—M. Guéniot presented to the Academy of Medicine, of Paris, a double placenta obtained from a II-para, delivered at the eighth and a half month of a single healthy child. The placenta consisted of two flattened symmetrical portions, each one receiving one of the arteries of the cord, the vein being formed by the fusion of large vascular trunks on the membranes and coming separately from the placental substance. The umbilical cord was bifurcated, the spiral form disappearing at the point of separation. Without entering into all of the interesting points connected with such a state of affairs, its medico legal aspect is one which should not be overlooked. The presence of the umbilical cord only, could decide with certainty the fact of a single or double pregnancy, in such a case, so that a double placenta accompanied by but one child would be no conclusive evidence of infanticide.

CREOLIN IN GONORRHŒA.— Gonorrhœa, which has resisted other treatment, has frequently yielded in Dr. Margaretti's practice to irrigations, twice daily, with a solution of creolin of the strength of 5 to 8 per cent. administered through a hollow sound.—*Lancet.*

SALICYLATE OF SODA IN PRURITUS.—After having tried arsenic, bromide of potassium, atropine, sulphur baths, alkalies, emollients, M. Icard caused the symptoms, which had continued for eight or nine months, to disappear upon the day after the use of the salicylate of soda, three grammes a day. There is still no return of the trouble.—*La Gazette Médicale.*

COCAINE IN DENTITION.—M. Viguier has proposed the following to relieve the pain which children suffer when cutting their teeth, especially the canine teeth:

℞.—Cocaine hydrochlorat, ...	gr. 2.
Syrup simp, ...	ʒ 2½.
Tinct. saffron, ...	gtt 10.—M.

Sig.—Rub the painful parts of the gums many times a day.—*La Clinique.*

SOLUTION OF SACCHARATE OF LIME FOR BURNS.—This solution gives excellent results in burns produced by fire or acids. It is prepared by grinding together five parts of slacked lime with ten parts of sugar, and then shaking it with one hundred parts of water, and filtering after twenty-four hours.—*Pharm Centrahalle.*

ACTION OF IODIDE AND BROMIDE OF POTASSIUM UPON MORPHINE—(Dr. H. Kunz). After numerous experiments, performed for the purpose of determining the identity of the hydriodate and hydrobromate of morphine, the author arrives at the following conclusions :

1. It is necessary, as well as possible, to avoid using in prescriptions the iodide and bromide of potassium in combination with a salt of morphine; or when they are so used to prevent, by the addition of an alcoholic liquid, the formation of a precipitate.

2. Prescriptions containing these salts ought always be labelled "shake before taking."—*Journal de Médicine.*

CANCER TREATED BY CREOSOTE.—Neudörfer has just published an interesting little pamphlet on the subject, as stated by a correspondent of the *Medical and Surgical Reporter:* Carcinosis, the author says, is very probably just as curable as syphilis or phthisis. The excision of a carcinoma, as of a hard chancre, is, as a rule, not far-reaching enough to prevent the infiltration of the surrounding tissues with the specific microbes and cells. He believes that the medicinal treatment of cancer should be tried more extensively than has been the case hitherto. The rind of condurango and Chian turpentine have often given promising results. There are also, as in phthisis, climates favorable for cure. On the plateau of Mexico and at the Cape of Good Hope, for instance, cancer is an exceptional disease. The principal office for the surgeon, in Neudörfer's opinion, is not the extirpation of the neoplasm, but the medicinal treatment of the cancer cachexia, which is the chief factor in bringing about the death. The treatment of cancer is naturally much like that of phthisis. Creosote, which has been found to stimulate the nutrition of the blood-corpuscles, is of equal value in cancer and in phthisis. He has obtained decided results in the treatment of cancer with the following preparation:

℞. Creosoti puri,
Sodii bicarb,
Olei morrhuæ. . . . . āā f. ʒ v.

M. Put in 100 gelatine capsules. Take three capsules three times daily, after each meal.

A very eligible substitute for creosote is creolin, as it is not only cheaper than the former, but is also a stimulant of digestion. He prescribes:

℞. Creolin, ... m xv.
Ext. glycyrrhizæ, q. s. ut ft. pil. No. 100.
Sig.: Three pills, three times daily.

Locally, Dr. Neudörfer prescribes with the above pills:

℞. Creolin,
Ichthyol,
Iodide of potash, . . . āā gr. xj.
Vaselin,
Lanolin, ... āā gr. xv.

M. F. ung. Sig.: Rub into the part three times daily.

Neudörfer boasts of three actual "cures" of cancer obtained with this treatment.

NEPHRECTOMY IN RENAL PHTHISIS.—In the *Gazeta Lekarska*, Nos. 1 and 2, 1888, Dr. Matlakowski, of Warsaw, details a successful case of extirpation of the right kidney in an extremely emaciated woman of 26, affected with incipient pulmonary tuberculosis, fever and renal disease, the symptoms having appeared shortly after her last (very difficult) labor, about eleven months before the operation. The latter was performed after Ollier's method—that is, by an extraperitoneal lumbar incision with intracapsular extirpation. The pedicle made of the ureter and blood-vessels was stitched into the wound. There was but slight hemorrhage. The kidney proved to be be enlarged and consisted of large spherical cavities and cheesy masses, the still remaining renal tissue being studded with typical tubercles. The patient left one month and a half later, in a greatly improved state—in fact, practically well in all respects.

Book Notices

HAND-BOOK OF THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE THROAT, NOSE AND NASO-PHARYNX. By Carl Seiler, M. D., Instructor in Laryngology and Lecturer on Diseases of the Upper Air Passages in the University of Pennsylvania; Chief of the Throat Dispensary at the University Hospital, etc. Third Edition. Thoroughly Revised and Greatly Enlarged. Illustrated with Two Lithographic Plates Containing Ten Figures, and One Hundred and One Wood Engravings. 8vo., pp. 373. Cloth. Philadelphia: Lea Brothers & Co.; Cincinnati: R. Clarke & Co. Price, $2.25.

The author says that the favorable reception accorded to the first and second editions of this work has been exceedingly gratifying, and has encouraged him in the endeavor to make the third edition even more worthy of the recommendation of the profession. A medical author must certainly feel very much flattered, when a book which he has written has met with such a favorable reception that not only a second edition is called for, but even a third edition is required to meet the demand. In the medical profession, in every department of medicine, there are many gentlemen of learning and ability ambitious of the honor of being authors, so that works abound devoted to the affections of all the specialties—not a few of them possessing great merit. Under such circumstances a medical work must possess great value to maintain its position as an exponent of the class of diseases to which it is devoted, until it reaches a third edition.

The object of the volume is to serve as a guide to students of laryngoscopy in acquiring the skill requisite to the successful diagnosis and treatment of diseases of the larynx and naso-pharynx. The author, therefore, has omitted all purely theoretical considerations, and has discussed only points of practical importance as concisely as possible, so that the work may be used as a ready book of reference on the subjects of which it treats.

The first chapter is devoted to a description of the Larygascope—its history—the laryngeal mirror—illumination—reflector—source of light. The second chapter explains the art of laryngoscopy, elucidating the optical principles involved. Then there is shown what should be the positions of the patient and the observer. Following upon this is demonstrated how the laryngeal mirror should be introduced—the obstacles to larygoscopy—autolaryngoscopy—infra-glottie laryngoscopy—rhinoscopy—posterior rhinoscopy. The work has in all seventeen chapters, forming a complete hand-book of the diagnosis and treatment of diseases of the throat, nose and naso-pharynx.

Those especially who wish to become expert in examining the throat and diagnosing the diseases to which it is liable will find the work very valuable.

HAND-BOOK OF THE DIAGNOSIS AND TREATMENT OF SKIN DISEASES. By Arthur Van Harlingen, M.D., Professor of Diseases of the Skin in the Philadeiphia Polyclinic; Clinical Lecturer on Dermatology in the Jefferson Medical College. Second Edition. Enlarged and Revised. With Eight Full-Page Plates and other Illustrations. 8vo., pp. 410. Cloth. Philadelphia: P. Blakiston, Son & Co.; Cincinnati: R. Clarke & Co. Price, $2.50.

This is the second edition of Prof. Van Harlingen's work on the diseases of the skin. In writing it he had in view preparing a work that would meet the wants of physicians, and afford them a volume for ready-reference. For this reason he has given space to the description, diagnosis, and treatment of the various affections of the skin, as met with in practice, touching lightly on questions of etiology, and omitting all reference to pathological anatomy. Etiology and the pathological anatomy of diseases are highly interesting subjects, but it is proper to relegate the consideration of them to large works in which they can be studied at leisure. A busy practitioner wishes a work devoted to the practical points alone which he can study without having his attention called to subjects which have no reference to treatment.

In this, the second edition, a few of the articles have been rewritten, and a number of new ones introduced. The additions have nearly doubled the quantity of the matter, but have not increased the size of the book. An especial feature of the present edition has been the introduction of a number of illustrations, some original and some copied from journals and monographs.

The work will now be more acceptable than ever.

THE FUNCTIONS AND DISORDERS OF THE REPRODUCTIVE ORGANS IN CHILDHOOD, YOUTH, ADULT AGE, AND ADVANCED LIFE, CONSIDERED IN THEIR PHYSIOLOGICAL, SOCIAL AND MORAL RELATIONS. By William Acton, M. R. C. S., Late Surgeon to the Islington Dispensary, and Formerly Externe to the Venereal Hospitals, Paris, etc. Seventh Edition. 8vo., pp. 263. Cloth. Philadelphia: P. Blackiston, Son & Co.; Cincinnati: R. Clarke & Co. Price, $2.00.

The author says that, in preparing the present edition, he hopes he may again be able to conscientiously state that no time or labor has been spared in the endeavor to make the work more worthy of the continued favor the profession has shown it. This is the seventh edition which we have before us; and the fact that it has passed through so many editions is evidence of the high esteem with which the medical profession has regarded the work.

"Mr. Acton," says the London *Medical Times*, "has devoted himself for many years with unwearying assiduity to the study of the diseases of the reproductive organs, and after an intimate acquaintance with syphilitic diseases gained in the clinique of M. Ricord, he has pursued in England the same series of researches as those which he commenced under that distinguished specialist. Indeed, with Mr. Acton, the investigation of every circumstance connected with the generative function has been a labor of love; and we accordingly find that whether as regards the structure, the functions, or the diseases of the organs in question, every circumstance has received the minutest attention."

On the subjects of impotence and spermatorahea, those bugbears of so many weak and foolish persons, and sources of inexhaustible wealth to the quack fraternity, Mr. Acton discourses with good sense, and indignantly exposes the nefarious tricks of the scoundrels who, on the pretence of curing a disease which often exists only in the imagination, extract enormous sums from their unwary victims.

The work has been for a long time, and continues to be, an authority as regards all affections of the reproductive organs.

HAND-BOOK OF MATERIA MEDICA, PHARMACY AND THERAPEUTICS.—Compiled for the use of students preparing for examination. By Cuthbert Bowen, M.D., B.A., Editor of Notes on Practice. 12 Mo. pp. 366. cloth, Philadelphia: F. A. Davis; Cincinnati: Alfred Warren. Price, $1.40.

This work, so small in size and cheap in price, but great in valuable information, we should think, would become very popular with second course students of medicine preparing for final examinations. Besides second course students, it will greatly aid those who are expecting to go before Examining Boards, preparatory to seeking positions in hospitals, in the army, etc. But it will not only be found valuable to examinates, but also to practitioners generally.

All the drugs recognized by the United States pharmacopeia and their officinal preparations have been treated in detail, special stress being laid on those points which in the past have proved stumbling-blocks to the candidate in the examination-room. The form of a question-and-answer book has been adopted as admittedly the best means of conveying the greatest amount of knowledge in the fewest words. In the majority of instances the original form of the questions as submitted to examinates has been retained.

Great care has been taken to familiarize the student with the best methods of administering the various drugs he will be called upon to use, and with this object a large number of standard prescriptions have been selected from the works of the most eminent authorities, which he can either adopt, with modifications to suit particular cases, or use as models on which to construct his own formulæ.

The author after giving some examples of prescriptions written according to the metric system, says: "Our own system of drachms and ounces for fluids is just as accurate, and a great deal more handy for the physician to write his recipes by than the substitute offered by the metric system, the adoption of which involves an amount of mathematical calculation which renders prescription-writing irksome."

We see no need of any change to the metric system in writing prescriptions. The English method we consider superior and certainly, as the author states, just as accurate. With those long-accustomed to the English mode, a change to the metric form would result in their making many serious mistakes. When the American physician hears mentioned a grain of opium, his mind at once comprehends the amount, and he immediately understands what would be the effect of it if taken by an adult, or by a child of a certain age; but informed that a powder contains 15 grammes of opium, before he can fully appreciate the strength of it, he must stop to consider what relation a gramme bears to a grain. In other words, he must mentally reduce the grammes to grains, for *he thinks in grains*. The present race of physician's must continue to write prescriptions in the old way, as they will expose themselves to great risks of making serious errors. The metric system can only come in use with the future race of medical men, who will learn it from the beginning.

Dr. Bowen's work is a very valuable one indeed, and will be found "to fill a want" beyond a doubt.

QUESTIONS AND ANSWERS ON THE ESSENTIALS OF SURGERY, Together with a Full Description of the Handkerchief and Roller Bandages. By Edward Martin, A.M., M.D., Instructor of Operative Surgery, University of Pennsylvania; Surgeon to the Howard Hospital, etc. With Ninety Illustrations. 8 vo., pp. 314. Cloth. Philadelphia: W. B. Saunders.

This work belongs to the series of Saunders' Question Compends, published by W. B. Saunders, 33 and 35 South Tenth Street, Philadelphia.

We quote the following from the preface: "As one is thrown yearly in contact with large numbers of medical students, and becomes familiar with the furious rate at which they are driven, the writer feels assured that, under our present system of rapid education, outline works are of distinct value. Third year men who attend six lectures and two clinics daily, have no time for reading, no time for systematizing their knowledge on any one subject. This work must either be done for them or left undone........

"The usefulness of arranging the subject in the form of *questions and answers* will be apparent, since the student, in reading the standard works, often is at a loss to discover the important points to be remembered, and is equally puzzled when he attempts to formulate ideas as to the manner in which the questions could be put in the examination-room."

The work will be found very useful to medical students preparing for their final examinations. Young practitioners also will find the work valuable for reference. It contains over one thousand questions and answers. There are numerous cuts for illustration.

CLINICAL LECTURES ON CERTAIN DISEASES OF THE NERVOUS SYSTEM. By Prof. J. M. Charcot, Professor to the Faculty of Medicine, Paris; Physician to the Saltpetriere, etc. Translated by E. P. Hurd M.D., Member of the Mass. Medical Society. 12 mo. pp. 155, Detroit: George S. Davis.

This little work belongs to the series of Physicians' Leisure Library, a number of which is published each month by Geo. S. Davis, of Detroit.

Prof. Charcot is the most eminent investigator of diseases of the nervous system of the present age. The study of the nervous system has brought to light the fact that it is composed of numerous centers and "systems" having special functions. Few, if any, have contributed more to our knowledge of the spinal cord in its physiology and its pathology than Professer Charcot. The fame therefore of Charcot, as a necrologist, is sufficient evidence that this little work is one of great value.

Editorial.

THE MEDICAL NEWS.—With this number the MEDICAL NEWS enters upon its *twenty-second* volume and *twenty-second* year of continuous publication. Assuredly it has the right to be considered an old and well-established medical journal.

We are anxious during the present year to double the circulation of the MEDICAL NEWS. We hope, therefore, that each subscriber will endeavor to obtain a new subscriber.

As we do not wish any one to work for us for nothing, we will send to any one who will obtain a new subscriber a good, reliable clinical thermometer, or any medical work that he may select from the catalogues of publishers, the price of which is one dollar. Or if the price of a work that any one may wish is more than one dollar, we will send it to him for a new subscriber, if the excess over a dollar is remitted to us in money. A two-dollar book can be obtained by sending two new subscribers.

In order that there may not be any misunderstanding we will repeat: Any one sending us a *new subscriber* and *two dollars*, we will send to him a clinical thermometer or a book, the catologue price of which is one dollar.

The January number has been delayed by a number of circumstances that we were not able to control. We hope, however, that we will soon be able to catch up and issue the journal regularly on the 20th of the month of its date.

IN the matter of the publication in the *British Medical Journal*, in breach of professional confidence, of the "script" of the late Emperor Frederick reflecting upon one of his medical attendants, the Council of the British Medical Association, at a meeting held on January 16, directed a letter to be addressed to Sir Joseph Lister, as the representative of the signatories to the memorials forwarded to the Council in December, stating that the Council "having received and published an expression of regret from the editor, and having themselves expressed their strong disapproval at the publication of anything in the least degree tending to a violation of professional confidence, they feeel that they have done everything which was necessary to vindicate the honor of the Association and of the profession." The Council also forwarded to Prof. von Bergmann a copy of the resolution of disapproval passed last November.

ABUSE OF NEW DRUGS.—The abuse of new drugs, says the *Kansas City Medical Record*, is a rapidly increasing evil. All along the line, from the metropolitan to the cross-roads doctors, the tendency is a rush for fame by being the first to employ a new drug for a new purpose, and after one or two trials, with probably imaginary success, they leap for the medical press like a lot of small boys running to a fire. Many physicians in recent years have even contracted the habit of hypothecating in order to give their statements more tone. Among the more abused drugs are antipyrin and antifebrine. They are recommended for the cure of everything except ingrowing toenails. There is but one safe way of testing the action of any remedy, and that is by collective investigation and comparison, and this can be more carefully done in large hospitals.

DR. WHEELER'S ELIXIR FERRI ET CALCIS PHOS. CO.—This preparation, made by Dr. Wheeler, of Montreal, has now been before the profession for a number of years, and the fact that it is still in large demand proves most conclusively that it is a medicine of very great value. We have always held it in high esteem, and a five years' experience of it has only confirmed our high opinion of it. It is palatable, and does not leave a disagreeable after-taste. Our readers who have not done so should include it among their list of remedies, and when occasion presents where it should be useful, we are satisfied, if prescribed, it will give every satisfaction.—*Medical Record.*

DEATH OF A MANUFACTURER OF MEDICAL PREPARATIONS—Mr. J. W. Lambert, of St. Louis, the well-known inventor and manufacturer of a number of medical preparations, one of which, and the most noted, was Listerine, died January 4. He was but 36 years of age, yet he had acquired a most extensive reputation. The company of which he was President will suffer in his decease a great loss.

THE TRI-STATE MEDICAL ASSOCIATION, of Mississippi, Arkansas and Tennessee, elected the following officers to serve for the ensuing year: President, Dr. S. W. Sanford, Tenn.; First Vice-President, Dr. J. Y. Murray, Miss.; Second Vice-President, Dr. L. L. Battle, Ark.; Third Vice-President, Dr. J. A. Battle, Tenn.; Secretary, Dr. S. A. Rogers, Memphis; Assistant Secretary, Dr. A. W. Pate, Memphis; Treasurer, Dr. T. J. Crofford, Tenn.

A GREAT BEER DRINKER.—The *St. Joseph Med. Journal* contains the following: We noticed in a daily paper of recent date, an account of a man who drank daily from eight to ten quarts of beer, often swallowing two quarts at one sitting.

The statement was regarded with incredulity by most readers, but when considered a moment there is no reason to doubt the truth of the statement. The man was undoubtedly a sufferer from diabetes insipidus, a complaint which is attended by intense thirst and polyuria, and requires the ingestion of large quantities of water. The quantity of fluid taken by patients who have this complaint is equaled only by the urine passed.

Cases of this nature are not so uncommon as we might suppose, and are especially common among the insane.

The amount of beer taken by the man mentioned is, in comparison to the libations of some others, rather insignificant.

Willis reports the case of a man who drank two pailfuls of water daily; he also mentions a French woman who drank four pailfuls of water a day. She was examined by a commission, and in the presence of its members drank fourteen quarts of water in ten hours and voided ten quarts of colorless urine. Dickinson relates the case of a farmer who usually drank a quart of water at a time and repeted the draught sixteen or eighteen times in a day and night, passing about as much urine as he drank water.

So when we take into consideration the well-known fact that sufferers from diabetes insipidus often show a wonderful tolerance of alcohol, the statement of the newspaper that he drank ten quarts of beer daily is not at all incredible.

IRON IN TYPHOID FEVER.—In an editorial in the *Kansas City Med. Record* iron, especially the muriated tincture, is mentioned in the highest terms as a therapeutic agent in the treatment of typhoid fever. In the hemorrhages, which sometimes occur in that affection, it speaks of its effects as follows: "We have repeatedly said in former issues of the *Record* that tincture of iron, in large doses, frequently administered, would better serve the purpose of arresting hemorrhage than any other remedy used, and we have repeatedly verified this fact. In a recent case in the country, some distance from this city, where we were called in consultation, all the modern remedies had been faithfully tried, with no apparent benefit; the hemorrhage was frequent and profuse up to the time we visited the patient.

Large doses of tincture of iron were ordered given every two hours; the hemorrhage soon stopped and did not return. The iron was continued until recovery was nearly complete.

"We have been in the habit of giving iron in every case of typhoid fever for fifteen years, and have had no reason to distrust it. We have abiding faith in its local action on the ulcerated agminate glands, to say nothing of general effects. The so-called cause of the fever—the typhoid bacilli—may possibly be destroyed or arrested in their action by contact with the tincture of iron. It is well known that but a small quantity of the iron is absorbed in its passage through the small intestines, and thereby the bacillus may be arrested in its destructive process."

A Physician's Fee.—We clip the following item from a newspaper. The information contained in it was telegraphed from Baltimore to a Cincinnati paper:

"There promises to be some interesting litigation over Dr. Nathan R. Gorter's suit for $25,000, fees for medical services rendered Mr. Robert Garrett during the latter's tour of the world. John K. Cowen, attorney for Mrs. Garrett, has deposited in Court $4,000, which, he claims, together with $1,000, is ample and liberal compensation for the Doctor's services. The Court is asked to grant judgment in the above amount should the plaintiff continue his suit.

"Dr. Gorter has stated in support of his claim that, during his travels abroad, he was deprived of a large and lucrative practice, and that his duties in attendance upon the eccentric millionaire were very onerous. Dr. Gorter will probably continue to contest for his claim in the Courts, in which case some interesting features of the ex-railroad President's tour around the world, and which have never been told, may be made public. Mr. Cowen, counselor for Mr. Garrett, says that Dr. Gorter accompanied Mr. Garrett to San Francisco, thence across the Pacific, and when the party arrived in Berlin in May, 1888, he left them. He was then desired to name the amount he proposed to charge for his services, in order that he might be paid at once, but he declined to do so, on the ground that he desired to consult with his friends in America as to what would be a proper charge. He asked, however, to be paid $1 000 on account, which was promptly given him, and in addition a sum amply sufficient to cover the expenses of his return home. Up to that point all traveling expenses of every description from the time he left Baltimore had been paid by Mr. Garrett. After Mr. Garrett's return to America last summer, Dr. Gorter sent him a bill for professional services amounting to $25,000, crediting the thousand dollars paid to him in Berlin when he left. This charge was deemed to be excessive, and some inquiries were therefore made on Mr. Garrett's behalf as to precedents in like cases, and what was established by them to be a proper rate of compensation for such services to a physician of Dr. Gorter's age and practice. A number of New York physicians were consulted, who, either in their own practice or otherwise, knew of the employment of younger members of their own profession in precisely such cases. In the opinion of these gentlemen Dr. Gorter, for his sevens months' medical attendance while traveling with Mr. Garrett, would be very liberally compensated if he received $5,000 and his expenses. This sum was at once offered to Dr. Gorter in settlement, but was declined by him. It was then proposed that the amount of his compensation should be fixed by two eminent members of the profession, one to be selected by him and the other by the representatives of Mr. Garrett. This method of settlement was quite acceptable to Mr. Garrett, but before the details of the proposed arrangement were agreed upon, and while they were under consideration, Dr. Gorter withdrew his proposition for reference and instituted suit "

When Mr. Garrett, who is now hopelessly a lunatic, and is confined, we believe, in a private asylum, was traveling around the world, if he had had occasion to take an attorney-at-law with him we have no doubt but that the attorney would have sent his estate a bill, not for $25,000, but for $50,000; may be for $75,000. The attorney who was administrator to the estate of the late Archbishop Purcell, of Cincinnati, who, through the mismanagement of those to whom he had given in charge the business of his diocese, was unable to repay about four millions of dollars of money that had been loaned him for investment by members of his flock, when he came to make partial settlement with the Court, presented a bill of $18,000 for extra services, stating that, to unravel the many complications and reduce the business to order, he had expended several hours a day for about four months. The fees allowed him by law for services as administrator of an estate, in which millions are involved, amount to a sum sufficient to make the majority of people feel rich; and administrators generally would consider that with them alone they possessed a bonanza—but not so with this attorney. He could not be content with only a per cent. in handling millions. He was an attorney, and should not be limited to per cents. like other men. The Court allowed the claim, though it was proven that all he had done was clerical, for other lawyers swore that they would have charged from $20,000 to $30,000 for the same work. This attorney, it is known, attended right along to his usual law business; and there is reason to believe he did not lose a dollar from clients in consequence of his arduous four months' labors in behalf of the Purcell estate.

A law firm in Cincinnati received over $200,000 for looking over the papers containing the condition on which the Cincinnati Southern Railroad was leased for a certain number of years to a certain company. Mr. George Pendleton, U. S. Minister to Germany at the present time, charged and received $75,000 for prosecuting a claim of the Kentucky Central Railroad against the United States Government.

It should be known who the New York physicians are who stated that $5,000 was ample compensation for an eminent medical gentleman who had quitted a large and lucrative practice for seven months to attend professionally upon a crazy millionaire. We can believe, without the production of evidence, that the services upon such a patient were onerous in the extreme. In fact, so sure we would have been of the great labor involved in attending upon such a man starting upon a protracted voyage, that if a physician, who had been solicited to accompany him professionally, had consulted us in regard to the amount he should charge for compensation, we would have recommended not to accept less than $30,000, and we would have advised upon insisting that that amount should be placed in bank for that purpose, before starting.

No one but himself can perform a physician's work when he is engaged in practice. Buisness men generally can leave their business in the hands of others for a few months without much loss, but a physician cannot. Consequently, when he absents himself, there is a total loss of the income from his practice. But not only that, he risks greatly injuring his business, for he may find that some of his families have been captured by designing parties.

The income realized by the New York medical gentlemen from their business who consider that $5,000 would be liberal compensation to Dr. Gorter for seven months' services (requiring one month to return home) to a demented rich man, who had lost what intellect he had in scheming for wealth, as if man's chief end was to pile up dollars, must be small. One of them can not be a certain gentleman of eminence who told a friend of ours that he realized $30,000 a year from his practice. We hope some one will be successful in ascertaining who the physicians are who are of the opinion that a distinguished member of their profession—or, if he is not especially distinguished, is recognized by his *confreres* as a very competent practitioner, having a remunerative business—will be *liberally* compensated by receiving a check for $5,000 for giving up his practice to go on a voyage around the world in attendance upon a lunatic, consuming two-thirds of a year. Notwithstanding the sum may seem so liberal to these gentlemen, yet it is only double the amount that a nurse we know, a very ignorant man, but reliable, received from a Cincinnati gentleman for taking charge of his son, a young man requiring but little attention, on a trip to Europe about two years ago. The nurse was paid five dollars a day, seven days to the week, and all his expenses. Is a physician, who, on acount of his learning and culture, is entitled to occupy a position second to none in society, to receive for compensation for his professional services only double the amount a menial receives for wages? Shame to men who would thus degrade their profession to a level with the calling of menials.

THE CHILDREN OF ISHMÆL.—The Rev. Oscar C. McCulloch, of Indianapolis, is a gentleman who has lectured much upon systematic charity. We have attended his lectures a number of times, when lecturing in Cincinnati by invitation of the organization known as the "Associated Charities." He takes much interest in the organization, and seems anxious to establish societies of them everywhere, particularly in large cities.

Mr. McCulloch is of the opinion that the indiscriminate giving of charity is a great evil—tending to foster vice and crime; that by such a method of dispensing relief to the supposed poor, but few worthy poor are relieved; the lazy, worthless, dissolute, and vicious receiving the greater part of the alms thus bestowed. The results of our observations confirm the correctness of the statements of the Rev. gentleman. The worthy poor, as they are termed—those who are poor through no fault of their own, but are so from circumstances they were unable to control, as misfortunes, disease, etc.—make known their wants reluctantly, and press their claims with hesitation, but the undeserving are importunate in their demands, and refuse to be turned away. The results, consequently, with alms-seekers are the same as with buisness men, to employ a rather odd comparison, the most energetic and *enterprising* are the most successful. What is a really melancholy fact, the more *bare-faced* a beggar is, the greater is the amount of *charity* he receives, while the modest and retiring seeker of aid, though generally the most worthy, is the least successful in obtaining gifts.

Mr. McCulloch urges that begging from door to door of whatever kind—whether for food, clothing or money—and street begging, should be discountenanced. He is of the opinion that the charitable should put their money in a common fund, and that persons should be employed to take charge of it and dispense it to those needing help in proportion to their necessities. Then visiting committees should canvass everywhere throughout a city and seek those who are poor and distressed and send them to a central office for relief.

Indiscriminate giving of charity, without knowing whether the recipients of it are worthy or not, he asserts, operates powerfully in creating a debased, vicious criminal class, whose membership will increase every year. At a meeting of the National Conference of Charities and Corrections, held at Buffalo, he read a remarkable paper entitled, "The Children of Ishmael: A Study in Social Degradation," in which he illustrated the effect of giving charity to unworthy people. We copy the following account from the *Peoria Medical Journal:*

"He had upon the stage an immense diagram showing the social condition of thirty families through five generations, numbering 1,692 persons. The history of these people had been followed up for fifty years. It was of the most startling nature. There had been several murderers in the group, and theives without number. They did not work. They lived by begging and petty thieving. The children died young. Licentiousness characterized all the men and women. From this results mental weakness and incapacity to work, and this is all met by the benevolent public with unlimited public and private aid, encouraging them in an idle and vicious life. The speaker believed that public relief was in a large degree chargeable with the perpetuation of this stock, and what public relief failed to accomplish, private benevolence supplemented. The so-called charitable people who give to begging women and children had a large sin to answer for. Out of these 1,692 persons, Mr. McCulloch said he knew of but one who had risen from them and had become an honorable man. The remedy he indicated was to close up official out-door relief, check private, indiscriminate benevolence or charity, falsely so-called, and get hold of the children."

WONDERFUL EFFECT OF PULSATILLA.—For the enlightenment of our regular brethren we copy the following from a homeopathic medical journal, that they may know something about the wonderful properties of *pulsatilla*. We hope they will feel under due obligations to us for this clipping.

"When I first began the practice of medicine it seemed to me that every female patient I had needed pulsatilla and macrotis, and I accordingly, for a great while, gave them: frequently, however, I would give pulsatilla alone; and the strangest thing was that within twelve months every patient that had taken pulsatilla gave birth to a child, and one or two of them misses—suspicious characters, who had doubtless been gratifying their passions for some time, which had never proved itself.

I have since been studying the action of pulsatilla in this direction, and you need not doubt that it will cause conception in a great many cases. So, if you meet with a married couple who are hunting a child to adopt, give them pulsatilla and send them home. I know it will not cause conception without coition, but I am sure that it exerts a wonderful influence with those who are cohabitating: that if one will put a few drachms in a public well, every woman in town who is cohabiting will bring a child. So I would warn the ladies who are guilty of this practice, and desire to keep it to themselves, to beware of pulsatilla."

SIR MORELL MACKENZIE.—We are astonished to learn by a cable dispatch to the *Daily Press* that the College of Physicians and Surgeons of London, has expelled Sir Morell MacKenzie for writing his book on the disease of "Frederick the Noble." It is stated that both the Empress Frederick and Queen Victoria interfered to save him, but without effect.

Sir Morell, as stated by the *New England Med. Monthly*, was attacked, villified, lied about, and nearly mobbed, and his book was simply his defense, and though hasty in some of its parts, yet he only used the weapons which had been used against him." It was a complete vindication of his whole course in the Emperor's case, and it is an outrage for his countrymen to disgrace him for a technical violation of an unwritten law, an error, if error it was at all, made under stinging provocation."

PROFESSIONAL COURTESY.—One hears so much about the jealousy of physicians—of their mutual backbiting, quarreling, and generally splenetic state toward each other—that it is really somewhat refreshing to learn that we are not in reality a disunited body. Our esteemed contemporary, *The Journalist*, for example, has recently celebrated our united state in the following somewhat ferocious terms :

"There is not in this world to-day a more powerful, more monstrous, more unjust, and iniquitous organization in existence than that mysterious bond which fetters the medical profession as with links of steel, which is known as "professional courtesy." Professional courtesy is an excuse for neglect, for procrastination, for carelessness which is in too many cases tantamount to murder. It is no rash statement to assert that there are hundreds of cases known to physicians who are in other respects reputable men, where patients have died through the criminal neglect and stupidity of the attendant physician; yet you could not worm an admission of that sort out of them in a court at law—they are bound by "professional courtesy" to allow their ignorant, incapable fellow-practitioner to go on murdering without a word of remonstrance."

Thus it seems that physicians do stand by each other, after all. This is not very surprising when one considers the difficulties and limitations of our art. When an engineer miscalculates in building a bridge, his incompetency can be demonstrated mathematically; but when a chronic invalid, with some obscure malady, receives a series of prescriptions, under which he or she gets no better, the incompetency of the physician is hard to prove. The malady itself may be impossible of recognition and of cure. Doctors know this. It compels them—if they have any sense of justice—to charity toward their fellows. We follow a difficult and laborious calling. There are black sheep everywhere, and sometimes, perhaps, "professional courtesy" has been made to shield them; but we do not think that harm often comes from its exercise, and indeed medicine could not be practiced without it.—*Medical Record.*

SOME POPULAR MEDICAL SUPERSTITIONS.—In a book entitled "A Bird's-eye View of France in the Middle Ages," M. Challemel refers to a number of superstitions which were current at the time, many of which have not died out. There were several means of warding off fevers. One was to eat neither meat nor eggs at Easter, and on other solemn festivals; another to carry about on the person a piece of human bone; and still another to pluck and eat the first daisy found in the field. In order to cure a fever the sufferer would rise early in the morning and go out into the field, walking backward all the time, pluck a handful of herbs and, without looking at it, throw it behind him, and then return quickly to the house. The fever then forsook him and fastened itself upon the devil. The Bretons preserved their children from all evils by putting on them a damp shirt. A knife with a white handle was a sure preservative against colic. The toothache was quickly relieved by touching the painful part with a dead man's tooth. Running here and there, without particular aim, through a church, was sufficient to ward off pleurisy. The formation of gall-stones was rendered impossible by rolling one's self naked in a field of oats. Spitting in the mouth of a live frog was a very efficacious remedy for a cough. Earache was cured by touching the ear with the hand of a skeleton, and headache was quickly relieved by binding the temples with a cord by which some one had been hung.

THE STATE BOARD OF HEALTH OF ILLINOIS is evidently not as great a power as some believe it to be. Some time since, the Board revoked the license of Dr. H. G. Wildman, of the firm of Wildman & McCoy, of Chicago. The cause which was given was unprofessional practices. Wildman took an appeal to the Governor who has reversed the decision. In addition to this the Peoria *Transcript*, Bloomington *Eye*, and other sheets are advocating the abolishing of the Board.

THE
CINCINNATI MEDICAL NEWS.

VOL. XXII. No. 254. Old Series. FEBRUARY, 1889. VOL. XVIII. No. 2. New Series.

Original Contributions.

On Treatment of Tumors of the Cerebellum.

BY PHILIP ZENNER, A.M., M.D., CINCINNATI.

In a paper on "Tumors of the Brain," read before the Academy of Medicine, February 1st, 1886, in reference to operative treatment, I spoke of tapping the ventricles as a palliative measure in some cases of tumor of the cerebellum. This suggestion was made by Wernicke, but I do not know that it ever has been followed out in practice. In order to again bring this therapeutic measure before the profession, I wish to briefly report a case in which the measure had been proposed, but its accomplishment prevented by accident, and in which it would, in all probability, have effected a brilliant result.

Clara G., aged 17, living in Newport, Ky., was brought to the nervous clinic of the Medical College of Ohio, July 4th, 1888. Her illness began quite abruptly six months previously with headache and vomiting, since when she has been an almost constant sufferer. She has suffered with severe headache, which, according to her own statement and that of her mother, was always frontal, and never in any other part of her head, frequently accompanied by vomiting, without sense of nausea; and she has occasionally had slight vertigo. Almost from the beginning of her illness it was observed that she had difficulty of walking, a reeling gait, and lately, in part owing to impaired vision, she has not been able to walk alone. Three months ago her vision was found to be defective. She became entirely blind in the left eye four weeks ago, and in the right eye four days before I saw her. At the present time there is no perception of light.

At our examination, in addition to the blindness and the reeling gait, it was observed that the pupils were dilated and did not respond to light, and that there was deafness of the left ear, the watch not being heard on firm pressure. No other motor or sensory paralysis was manifest. There was well-marked double optic neuritis. These symptoms and the severe headache complete the history of the case.

The severe and persistent headache, vomiting and double optic neuritis made the diagnosis of brain tumor assured; the reeling gait, and the rapidly setting in blindness, of which I will speak directly, made it almost equally certain that the location of the tumor was in the cerebellum, while the deafness on the left side made it probable that it was seated in the left lobe; and tumor on the left lobe of the cerebellum was, in part, my diagnosis, at the time. I say in part, for of the most important part of the diagnosis, as concerns our present subject, we have yet to speak; that is, the presence of a considerable quantity of fluid in the ventricles, a degree of internal hydrocephalus. In most cases of brain tumor there is some increase of fluid in the ventricles, but this accumulation is often large, and, therefore, an important element in the production of symptoms in tumors of the posterior fossæ, especially tumors of the cerebellum. Tumors in this part seem to compress the veins of Galen or the Sylvian aqueduct, and thereby cause an increase of fluid in the ventricles. This large and rather rapid accumulation of fluid causes various general symptoms, especially intense headache, and often one special symptom, blindness. Double optic neuritis is one of the most common, and most valuable diagnostic symptoms of brain tumor, but, in itself, it rarely if ever, causes complete blindness; vision is often not impaired in the the least, even when neuritis is well marked. Blindness, especially a rapidly setting in blindness, is, therefore, due to a complication, and, in cases of cerebellar tumor, the complication is almost always compression of the optic tracts by fluid in the distended ventricles and subsequent atrophy of the tracts. Blindness in these cases is therefore a valuable diagnostic symptom, and, perhaps, an important guide in treatment. In our patient, then, in addition to the tumor of the left lobe of the cerebellum, we were enabled to diagnose the presence of a considerable accumulation of fluid in the ventricles, and the case, therefore, seemed very favorable for the kind of treatment we are considering—tapping the ventricles. In addition to the intense pain, there was reason to hope that diminishing the intracranial pressure might result in the restoration of sight, for complete blindness had only been of a few days' duration, and there could not yet have been any considerable atrophic changes in the optic nerves.

The patient was at the dispensary on the 4th. On the following day I mentioned the case to Dr. Ransohoff and asked him whether he was willing to tap the ventricles, stating at the same time, that, so far as I knew, such treatment had never been instituted. The doctor readily consented to perform the operation, and we were to have visited the patient the same day to ask consent to an immediate operation. Other engagements prevented our visit on that day. I then decided to visit the patient on the 7th to speak of the operation, but I received word on that day that the patient had died suddenly. One should never be surprised at the occurrence of sudden death in cases of cerebellar tumor, as it occurs frequently; in fact, the majority of cases I have seen terminated in this way, probably on account of the indirect involvement of the vital centers in the medulla and pons. Nevertheless, as the patient had been brought over from Newport a few days before, and was, apparently, in fair health at the time, the fatal termination came very unexpectedly to me, and I reproached myself for not having made other engagements yield to the urgency of this case. I enter thus circumstantially into the case not because its scientific merits are thus enhanced, but, by revealing my own disappointment, to show how much stress I lay upon the proposed operative procedure, with the hope of influencing others to resort to it.

The post-mortem examination was made by Dr. Otis L. Cameron, eight hours after death.

When the calvarium was removed the dura mater was found tightly stretched over the brain, its veins filled with blood. A trocar was now passed at various points through the membranes toward the ventricles, and after penetrating about one and one-half inches in each instance clear fluid escaped. The brain was then removed. On viewing its under surface the floor of the third ventricle appeared quite traslucent, and pushed downward by distending fluid. The blindness was doubtless due to pressure upon the optic tracts at this point. All the ventricles were found to be much distended, and probably contained a few ounces of fluid, though the latter, escaping during the dissection, could not be measured. There was a large oval-shaped tumor, about two inches in its largest diameter, in the left lobe of the cerebellum. The tumor could easily be shelled out; in fact, it did not belong to the tissue proper to the cerebellum, though it had almost hollowed out the left lobe, where it made a bed for itself. The outlines of the pons were also somewhat distorted by the growth, the left side being pressed laterally, but probably to no extent destroyed. The left auditory nerve lay under the tumor and was doubtless compressed by it, though, in the fresh specimen, no decided signs of compression could be noted.

The tumor, somewhat harder than the brain substance, was, probably, a sarcoma which grew from the membranes, to which it was partly adherent. A microscopical examination will be made by Dr. David DeBeck, who was present at the post-mortem examination and who examined the patient's eyes during life.

The post-mortem examination showed that this would have been a beautiful case for an operation. The fact that the tumor could be exactly localized, and that it could be so easily shelled out possibly indicates that it might have been a favorable case for a radical operation; that is, removal of the growth. But such operations must be the most difficult and dangerous in cerebral surgery, and though performed once, the patient died a few hours after its completion. I do not think many surgeons would be willing to undertake the operation, nor would I care to recommend it. But, on the other hand, the palliative measure we have in view, while, in itself, scarcely attended by danger, gave the promise of great relief. The diminution of the intra-cranial pressure would doubtless have very much relieved the patient's suffering; and there is a probability that vision would have been restored and life prolonged. It is true that this would have been only a palliative measure, but palliation may be very much. Mere relief of symptoms, especially if they be very distressing, is often a great blessing both to the patient and his friends. Furthermore, brain tumors need not necessarily produce a rapidly fatal termination. Sometimes the activity of the morbid process seems to be arrested and life prolonged indefinitely. I remember a case seen in the London Hospital in the service of Hughlings-Jackson, in whom, on account of the presence of double optic neuritis, headache, vomiting, reeling gait, etc., the diagnosis of brain tumor had been made five years before, but who, when I saw him, no longer suffered very much from pain, but was totally blind and deaf, as the result of the disease. I have a case under observation at present, where the first symptoms appeared several years ago, and now the chief cause of distress is the complete blindness, present almost from beginning. What a world of suffering might have been spared these patients if palliative measures, such as suggested here, might have saved their sight.

I have seen a number of cases of tumor of the cerebellum in recent years, but on account of the progress of the disease, blindness of long standing, etc., I hesitated to suggest an operation not formerly made, and which, with doubtful results at best, promised little in those instances. But in the case just reported, the intense suffering, the blindness just occurring, seemed to make it an unusually favorable case for this operation, an opinion which was confirmed by the autopsy.

I will mention a few points in regard to the operation which have occurred to me in thinking over this case. As regards the exact spot for tapping, at the post mortem examination in this case I first introduced the trocar almost three-fourths of an inch to the side of the median line connecting the auditory orifices, and reached fluid after penetrating one and one-half inches beyond the dura mater, but I succeeded almost equally well at several points posterior to this. In any case where the operation is called for there will probably be no difficulty in reaching the ventricles. The chief points to be remembered are to avoid the longitudinal sinus and the large meningeal arteries. The depth to which it will be necessary to penetrate will depend on the amount of fluid in the ventricles.

When there appears to be no urgency perhaps it would be well, after trephining, to close the external wound, and only when the latter is entirely healed try to reach the ventricles with the needle of the aspirator. I suppose in this way there would be much less danger of secondary inflammatory trouble.

How frequently the tapping must be repeated in order to maintain the relief obtained could only be learned from experience. Doubtless this would vary greatly in different cases.

Baltimore Academy of Medicine.

STATED MEETING HELD NOV. 6, 1888.

DR. H. M. WILSON, the President, in the chair.

Dr. J. Edwin Michael reported the following case of

PERINEAL SECTION FOR TRAUMATIC RETENTION.

On January 28, 1888, he was called to see a boy ten years old, a patient of Dr. Kemp. The boy had been coasting, and in sliding down the hill, he fell off his sled with his feet pointing up the hill so that the next sled struck him in the perineum. It hurt him, but not so much as one would think, for he went home, said nothing about the accident, but went up-stairs and played with his little sister for an hour. Then when he went to pass his water he found it impossible, but a drop or two of blood came from his urethra. Dr. Kemp was sent for, and after trying to pass a catheter without success, gave an anodyne and sent for Dr. Michael. There was dullness over the hypogastrium. The scrotum and penis were swollen, the right side of the scrotum was œdematous and a few drops of blood came from the penis and there was a frequent desire to micturate. He thought it was a rupture of the urethra and a urinary infiltration. He did not attempt to pass a catheter, but concluded to do an external perineal section without a guide through the urethra. Without describing the operation, he found the cavity filled with blood clots, but there was no urine. He found the urethra with a steel sound No. 10 English measurement. The instrument passed freely into the urethra and went up until the handle came up against the perineum, and then he found he could feel the end in the abdominal cavity, within one half inch of the umbilicus. He was much disturbed at first and thought it was a rupture of the bladder or a false passage made by himself. Twenty-six ounces of clear urine were brought away by the catheter. The interesting point was the ability to pass the sound so far. It must have been a retardation of the development of the fusiform portion of the bladder. It was a case of undeveloped or fusiform bladder. He had not had time to look up all the literature, but found no mention of such a case in the books which he had consulted. Sappey says that the bladder is developed to its usual shape at eight years. This boy was ten. The subsequent progress of the case was as usual. He was puzzled about the œdematous swelling in the scrotum and inguinal region. There was no infiltration. The swelling passed away and the wound healed kindly. He taught the boy to introduce the instrument himself. He is doing well now, but he is afraid the boy will suffer from traumatic stricture in the future. If he neglects to pass the instrument regularly another section may be necessary. He had not seen him for three months.

Dr. B. B. Browne said that in retention of urine in women it is not uncommon to find the catheter carried up to the umbilicus. He thought the bladder would extend in the direction of least resistance.

Dr. A. K. Bond asked if the sound passed up, in Dr. Michael's case, to the same distance after the bladder had been emptied. He had had occasion once to look up the subject of imperfect closure of the urachus and found that it occurred not infrequently. It was left patulous both in children and grown persons. It was evident that the urachus was forced open by the distention of the bladder.

Dr. B. B. Browne said Dr. Bond's remarks reminded him of a case in a female child in which the urachus had remained open and a calculus had formed in it, filling the whole urachus like a small banana. He thought it was defective developement.

Dr. S. C. Chew said the fact that the sound reached so far when the bladder was empty showed that it was not developed.

Dr. G. Lane Taneyhill had once passed a sound in a boy twelve years old up to the umbilicus, and it only stopped there because the handle came against the pubes. He was told it was a "watery tumor," and so it was. This was in 1860, when he was more inclined to investigation than now. He drew off the water and then passed the sound just as far again. There was no serious result.

Dr. Michael said the fact of passing the sound to the umbilicus was not unusual in chronic cases of distended bladder. In old persons the bladder sometimes rises above the umbilicus, especially in enlarged prostate. In the case he just reported, the distention only lasted one day, and he did not think it would go so high. There can be no positive conclusion *intra vitam*, but he thought that he was right from the fact that he could pass the sound up just as far after the bladder had been evacuated.

Dr. S. C. Chew then reported a case of

TYPHOID FEVER WITH UNUSUAL COMPLICATIONS.

A woman was taken with a well marked case of typhoid fever with no symptoms wanting to make the diagnosis. There was a large intestinal hemorrhage which he checked with turpentine. She was making a good recovery when, during convalescence, there was an inflammation of the partoid gland. This is comparatively rare in typhoid but common in typhus. Trousseau says it is almost uniformly fatal. The abscess was punctured and the case was doing well when lately, as the temperature was gradually descending, it suddenly arose from 98⅖° to 106⅖°. He could not understand the cause of this. From 106⅖° the temperature then fell to 100°. He looked for peritonitis. In the evening it rose to 105°, thirty grains of quinine having been given. It rose again and fell to 98⅖° under the effect of twenty minims of the hydrobromate of quinine given hypodermically. The next evening it was up to 105⅘°. With quinine it fell to 101°, rose to 103⅖°, fell to 102⅖°; that evening rose to 103⅗° and the next morning fell to 100°. Dr. Tiffany said he had seen a similar case but could not explain it. Dr. Chew gave the quinine, ten grains every three hours.

Dr. H. M. Wilson asked if quinine had the same power in malaria and in decided forms of intermittent fever.

Dr. Chew said that quinine given hypodermically had an anti-febrile power as opposed to an anti-periodic power. He did not think reduction of temperature was the main object in typhoid fever. He gave antifebrin or quinine in preference to antipyrine.

Dr. A. K. Bond asked if quinine in moderate doses did not cause sweating. In his experience it did.

Dr. Chew replied that it reduced temperature, and in some conditions it would act on the skin in some persons. He had seen erythema produced by it.

Dr. Hiram Woods spoke of a young married woman whose husband was taken with typhoid in August. She nursed him and in the fourth week she was taken with it. Through her father he heard that she got along very well with no very high temperature until suddenly one day she had a convulsion, sank into a coma and died.

Dr. Chew said it was very hard to explain this without learning more of the history. She might have had some other trouble too. Convulsions are not usual in adults in this disease unless there is renal trouble, which might have been the case here.

Dr. John R. Uhler spoke of the

VIS MEDICATRIX NATURÆ

as exhibited in certain cases. He had a case which showed what nature, without treatment, would do. A young woman on whom abortion had been attempted by some quack, sent for him. He suspected it, but not being certain, since she tried to deceive him, gave morphia, and finally detected a suspicuous odor, and examined the girl and found a bundle or series of tents in the uterus, pressing through it into the bowel. He removed the tents at once, and then examined and found a recto-vaginal fistula. He used washes and healed without an operation. This is the second or third case of this kind in his knowledge that ended with fistula. In reply to Dr. Browne, he said the fistula was two to two and a half inches in the vagina.

Dr. B. B. Browne had had a similar case in which a sea-tangled tent had been in for a week, and although she had an anteversion the tent was not expelled.

Dr. T. A. Ashby had had no experience in this condition, but related a case of vesico-vaginal fistula in a woman thirty-one years old. There was hemorrhage, and he diagnosed epithelioma. She had usual tenesmus, inflammation of the bladder and the urine dribbled through this opening. The uterus was hard. The disease has probably extended. The disease was of interest because rare. He used vaginal injections and cleanliness. An operation has been suggested to close up the entire opening.

Dr. William B. Canfield then reported a case of

SECOND ATTACK OF SCARLET FEVER IN A CHILD TEN YEARS OLD.

He had been called to see a little girl ten years old. She had fever, enlarged tonsils covered with patches, like follicular tonsillitis; she had had headache and general malaise. Ordered mild wash for mouth and tincture of iron. Called again in a few days and mother said child had had a rash or eruption over face and body. It had only lasted one day. Child still feverish, throat better. On inquiry, found that child had had an undoubted case of scarlet fever eight years before which Dr. Brooker had attended. At that time she had dropsy and nephritis. On inquiry Dr. Canfield found that scarlet fever was prevalent in the neighborhood. A few days later asked for some of the child's urine and was told she passed very little. At this time she began to look puffy under the eyes. He examined urine and found granular casts and albumen in abundance. Ordered citrate of potash with infusion of digitalis, and swelling gradually disappeared. Child vomited occasionally and had no appetite. Thought second attack of scarlet fever in children very rare and not believed by some. This seemed like an attack. Other children in the house were not attacked.

Dr. Bond asked if albumen was still present.

Dr. Canfield said it was in a small amount, and he had found one cast that day.

Dr. John N. Mackenzie presented

A CASE FOR DIAGNOSIS.

A child ten years old had a growth in the posterior nares entirely filling up this space, also a large adenomatous growth in the left cervical region. He suspected syphilis, and had used large doses of the iodide of potash, pushing it almost to iodism. There was some improvement. The growth in the throat bled easily. The child was nourished with a tube and had improved under the regular administration of food in this way and the iodide of potash. We brought her to see if any light could be thrown on the diagnosis, and also to see if any one cared to take the case for operation.

Dr. J. E. Michael thought that the diagnosis of a secondary congenital and syphilitic growth was not well established. The fact that it had decreased under the iodide of potash would lead us to suppose this, but it is not an unusual growth. A malignant growth will also decrease in this way. The two growths must have a connection and he had never met with any syphilitic growth which was so easily susceptible to hemorrhage as this one.

Dr. J. J. Chisolm said he could not say what diagnosis he would make from the inside growth. This outside one looked like an adenomatous growth. The child was of a lymphatic diathesis. He did not think it was syphilitic.

Dr. W. C. Van Bibber also said he did not think it was of specific origin.

Dr. John R. Uhler had not examined it very carefully but was inclined to agree with Drs. Chisholm and Michael. He had also thought of exophthalmic goitre. There might be a vascular growth in the throat. It looked like an aneurism by anastomosis. He referred to the treatment of exophthalmic goitre by strophanthus

Dr. John N. Mackenzie said he did not bring it forward as a case of congenital syphilis. The history was very meager. He could say that under the iodide of potash and cod-liver oil, the nares became patulous and the growth softer. At first the palate was involved and the whole post-nasal region was filled up.

Dr. Robert T. Wilson thought it would be an excellent case to photograph.

Dr. J. J. Chisolm referred to a case in his own practice: A lady of thirty had been sent to him to have a cancerous jaw removed. At the beginning there had been an induration of the lower lip, which the family physician had thought best to treat by incision. It had not disappeared but grew worse. The whole lower lip was involved, which a second physician had almost entirely excised. It was extending to the throat. Dr. Chisolm thought it was syphilitic and declined to operate, but gave the iodide of potash with the bichloride of mercury. In six weeks she was well.

Dr. H. P. C. Wilson then gave an

ACCOUNT OF HIS VISIT TO THE CLINICS OF EUROPE.

He began by saying: "I am not gifted in the art of speech, and hesitate to speak on such subjects. When I go to Europe, as I do almost every summer, it is generally for pleasure and not for medicine. However, I saw some things this year which were of interest to me from a medical point of view. I attended the meeting of the British Medical Association in Glasgow, of which I am a member. There were from 1200 to 1300 physicians present. The meeting was general, but the work was done in sections. I did not pay much attention to the general meetings, but spent more time in the section of obstetrics and gynecology. It was a large section and met in one of the recitation rooms of the Glasgow University, and the room was filled at every meeting with many of the very best men in the whole British Empire, India, Australia, Canada, West Indies, England and France. Dr. T. More Madden, of Dublin, was president of the section and he honored me above my deserts, with Dr. Fordyce Barker, of New York, by placing us the one on his right hand and the other on his left. A very amusing incident occurred at which I got some éclat at the expense of Dr. Battey. Dr. Alexander Simpson read a paper on 'Intra-uterine Death, its Pathology and Treatment.' Dr. Robert Barnes opened the debate followed by Dr. Edis and others. The incident which followed was rather amusing, and I remember now that I told it at Washington. Dr. Fordyce Barker was called on and he spoke in his usual happy way. Then Dr. T. More Madden said, 'I now introduce to you Dr. H. P. C. Wilson, of Baltimore, the president of the American Gynecological Society,' and before I could open my mouth to protest, there was such a round of applause as I never heard before. I arose and stated that I was not the president of the American Gynecological Society, but that Dr. Robert Battey was. It had no effect, the applause still continued, and I was the lion of the day. I spoke on the preventive treatment of intra-uterine death, in which I took the ground that there could be no proper general treatment, it depended on so many extraneous things that we had to treat each individual case by itself. In a retroverted uterus the woman is sure to abort unless the uterus is raised; also with an irritable uterus, many women are liable to miscarry, and you have to adopt a different plan of treatment. Another paper which interested me was one to the subject of which I have paid much attention, namely, 'Obstructive Dysmenorrhœa and Sterility and its Treatment.' Any number of uterine dilators were exhibted, nearly every man who spoke on the subject showed one of his own invention. It gratified me to hear Dr. Robert Barnes take the position that Dr. J. Marion Sims and myself have always held, namely, that in a large majority of cases, nothing will cure but dividing the cervix backward and forward. But the after-treatment, I hold, is as important as the operation. I have had more pregnancies to occur from this operation than from any other operation for sterility.

The meeting was enjoyable. The British physicians are hospitable and cordial and treat us well.

I saw some operations in London by Drs. Bantock and Thornton, but when I got to London the hospitals were closing and the gentlemen were going on their vacation. London is dead from the end of July to the middle of September, most of the doctors are off fishing, hunting, etc. I paid about fifteen visits and found only one doctor at home, and he had only come to the city for a day, (Sir T. Spencer Wells).

I had a very enjoyable visit in Paris. Dr. Chisolm added much to its pleasure, but he was after the eye and I after *something else*. I found Doléris a very pleasant gentleman, and a progressive man in gynecology and obstetrics. He called on me the next day and drove me around Paris and took me to the hospital. I went the next day at 8 A.M. to see him do a laparotomy, and let me say just here that in the whole of Paris, if not in France, there is not a whole hospital entirely devoted to the treatment of diseases of women, and there is no professorship of gynecology in any college in France. Dr. Doléris operated well. He did not use a sponge in the operation, except in cutting the skin at the beginning of the operation. After that he turned on water and washed and washed until no blood came away from the abdominal cavity. I saw him also curette the uterus, and in this operation he used his curette which has a hollow handle through which water is forced throughout the operation, thus keeping the curetted surface clean.

I saw no Sim's speculum there. He took me to the Hopital St. Louis, to see Dr. Péan perform a vaginal hysterectomy for a fibroid tumor of the uterus. The room was crowded. He introduced me and said he regretted very much that the patient was not in a condition and asked me to stay and see it later, but I could not. I saw him, however, do three operations. One for a large sarcoamtous tumor of the thigh. He made an immense incision, and the peculiar part was that he tied no vessels, but used compression forceps so that when he closed the wound fifteen or twenty compressing forceps were hanging in bundles of two and three with sutures between the bundles. The patient was taken out with them.

The second operation was the removal of a nævus from the external labium of a clued. The thermo-cautery was used. The third case was one of umbilical hernia. It was larger than my double fist, in a child only six years old. It was a feeble child, but chloriform was given it boldly. I may say here that in all my travels in Europe I have never seen any anæsthetic used but chloroform. At one time the child stopped breathing and I thought it was dead, but Dr. Péan continued to operate regardless of the child's condition, while the assistants kept up artificial respiration. He had great trouble in getting back the intestines. He finally closed the wound and the child was taken away. The next day I saw one of the relatives of the child in an instrument shop, and to my surprise he said the child was doing very well.

I spent many pleasant and profitable hours with Apostoli. He was very pleasant and called on me and gave me a handsome breakfast. He took me to his hospital and to Gaiffe's establishment where he selected a battery and electrodes for me. I spent a number of days in his clinic from 2 to 6 P.M. His offices were crowded with women all the time. I thought that I knew something about electricity in gynecology as I had used it constantly for twelve months before going to Europe, but I found that I did not. There is no doubt about it, one who will go to Dr. Apostoli's clinic, see the cases, and hear the history, would find there is no humbugging about the use of electricity in certain diseases. I saw him puncture the uterus, pass the electrodes, etc. I have never seen a man use it as he does.

I saw him one day use it in a severe case of large myoma, commencing with small doses. He gave from 60 to 70 MA. A miserable woman came to me for treatment in Baltimore with a large uterine growth, she was so miserable from it that she wished to die. After treatment she looked better, the tumor was reduced one-fourth, and to day I saw her a changed woman. The tumor is reduced one-third and she is delighted. To day I gave her 110 MA. with the first application. Drs. Keith, of London, formerly of Edinburgh, told me that they had used it for eighteen months. They had in the above time, one hundred cases of myoma, about fifteen or twenty came for hysterectomy and ten had done fairly well. Dr. Keith is not an enthusiast, but a cool, clear-headed man. He said he had not done hysterectomy for eighteen months.

Operators do not claim that they remove entirely the growth, but they say that they can take a woman and make her comfortable with electrolysis when they are not justified in doing an operation. This they claim to effect in the case of myomata. I have been using galvanism in other cases a great deal of late. In pelvic cellulitis it is useful in removing the deposit of lymph by setting up an absorption.

I thank you for your attention, I will not take the Society's time longer."

Selections.

Physiology of Impregnation of the Ovum.

BY FRANKLIN TOWNSEND, A.M., M.D.

THE seat of contact between ovum and spermatozoon has not as yet been determined with absolute certainty; "but in all probability it occurs generally in the ovary itself, or in the vicinity of the Fallopian tubes, seeing that in mammalia, after intercourse has taken place, the surface of the ovary is generally covered with spermatozoids." (Bischoff.)

Hermann ascribes to the peculiar movements of the tubes (peristaltic) in the direction of the ovaries, as have been observed to occur in the lower animals, the passage of the spermatozoa through the tubes to the ovaries. ("Human Physiology," Hermann, 1878.)

"The spermatozoa find their way into the Fallopian tubes, and here (probably in their upper part) come in contact with the ovaries. In the case of some animals impregnation may take place at the ovary itself." This author accounts for the passage of the spermatozoa toward the ovary by, first, their inherent vibratile activity, and, second, by a retrograde peristaltic movement traveling from the uterus along the Fallopian tubes, as has been observed in some animals. ("Text Book of Physiology," M. Foster, 1885.)

Impregnation of the ovum normally takes place in the tubes, as he considers Dr. Allen Thomson has clearly shown. ("Anatomy," Gray, 1883.)

The place where fertilization of the ovum occurs is either the ovary or Fallopian tube. Thus, the spermatozoa must be able to pass through the tubes to the ovaries, and which is probably brought about chiefly by the movements proper to the spermatazoa themselves. "When once the ovum has passed unfertilized into the uterus, it is not fertilized in the uterus" ("A Text-Book of Human Physiology," Landois and Sterling, 1886.)

"The usual place for the ovum to meet the spermatozoa, and to be impregnated, is the Fallopian tubes," etc. (Yeo's Manual of Physiology," 1888.)

In Prof. John C. Dalton's latest edition on "Human Physiology" the following statements are found: "The egg, when discharged from the ovary, enters the fimbriated extremity of the Fallopian tube and commences its passage toward the uterus." Dalton regards the mechanism as due to the movements of the cilia of the epithelium lining the tube, "producing a kind of vortex " He recognizes, also, that the ovum becomes impregnated in the tube. (Dalton's "Human Physiology," 1882.)

Austin Flint says: "It is probable that the ovum is fecundated either as it enters the Fallopian tube or in the dilated portion near the ovary." (Flint's "Physiology of Man," 1875.)

"That the spermatozoa make their way toward the ovarium and fecundate the ovum, either before it entirely quits the ovisac or very shortly afterward, appears to be the general rule in regard to the mammalia, and the question naturally arises, by what means do they arrive there?" This author's view in regard to this last question is, that it is due to the inherent power of movement in the spermatozoa. ("Principals of Human Physiology," Wm. R. Carpenter, 1883.

In all instances, the spermatozoa make their way by virtue of their vibratile movements "through the whole length of the uterus and Fallopian tube to the ovary." "It is probable, however, that impregnation generally takes place in the upper part of the Fallopian tube," etc. ("Human Physoology," Henry Power, 1884.)

Chapman says that fertilization of the ovum must occur in the Fallopian tube. He speaks of the changes "by which the egg is transformed into the blastodermic vesicle as appearing during the passage of the egg through the tube." ("Treatise on Human Physiology," Henry C. Chapman, 1887.)

It is generally supposed that *it* (the ovum) becomes impregnated by the sperm cells before it reaches the uterine cavity. *Where* this takes place exactly can not for *certainty* be determined; it probably varies, and it is possible at any point, as the teachings of extra uterine pregnancy of gestation show." ("A manual of Midwifery," Alfred Meadows, 1876)

Cazeaux, in his "Theory and Practice of Obstetrics" (Cazeaux and Tarnier, 1886), puts the question as to this point, where the ovum meets the spermatozoon, and says: "Already, and the preëxistence of the ovule in the ovary, the occasional occurrence of ovarian and abdominal pregnancies, and the experiments of Nuck and Haighton, which had rendered fecundation impossible by ligating the Fallopian tubes, tended toward the conclusion that it occured in the ovary. Still this fact was not actually demonstrated, and it needed the definite proof of finding the spermatozoa on the ovary itself."

"At present there *can not be a further doubt on this point*, for Bischoff has been fortunate enough to *see them there*," etc. Since that period, Wagner and Barry have made similar observations. "Now, such results evidently prove that fecundation sometimes takes place in the ovary; but may it not take place also in the tubes, or even in the uterine cavity?"

"After coitus, the spermatozoa make their way through the Fallopian tubes to the pelvic cavity. It is possible, therefore, for the ovum to become fecundated in any portion of the route from the ovary to the uterus." In exceptional cases it may, after being impregnated, develop after being arrested in its course of travel, entirely extra-uterine. Such terms as abdominal pregnancy," "ovarian" and "tubal gestation" simply express the site of attachment of the developing ovum, which naturally is ectopic. (Lusk's "Science and Art of Midwifery.")

Of this, Leishman says: "The ovum is, as has been shown, developed with the ovary in the Graafian vesicle, and what has been observed in the lower animals leads us to conclude that, while yet it occupies that situation, and even before the rupture of the vesicle has occurred, impregnation may occur." On rupturing of the vesicle the fecundated ovum passes into the infundibulum of the Fallopian tube, thence by the tube into the uterine cavity, where its further development continues or progresses to maturity. ("Leishman's System of Midwifery," 1873.)

As additional evidence that the spermatozoon reaches even so far as the ovary itself and fertilizes the ovum, I may only quote from Parry's great work on "Extra-Uterine Pregnancy." Parry does not regard it difficult to conceive that the Graafian follicle might rupture and the ovum yet remain; this act, at the same time, allows of a better opportunity for the spermatozoa to fecundate the egg in its very shell. "When we remember the processes by which the ovum escapes from the Fallopian tube, it may occasion no surprise that it should be sometimes retained, even after rupture of the vesicle of De Graaf has occurred.

The following is the course of the fertilized ovum in its passage through the uterus: First, Graafian follicle; second, fimbriated end of tube; third, canal of Fallopian tube, fourth, interstitial (tube with uterine wall) portion with Fallopian tube, or horn of uterus. It may be arrested at any point in this course and continue its development (fœtal) just as it does in the uterine cavity. (Hart and Barbour, "Manual of Gynecology," Wood's Library, 1883.)

Barnes ascribes two functions to the Fallopian tube: First, to carry on liquids and the ovum by the movements of the cilia covering the epithelial cells of the mucous membrane to the cavity of the uterus; second to receive and transmit toward the ovary the spermatozoa of the male. The uterus is regarded by this author as being a thick, hollow, muscular organ "destined to receive the fecundated ovum," etc.

Coste's observations seem to prove that fecundation is almost always effected either upon the ovary or in the part of the tube nearest the fimbriated extremity, inasmuch as he maintains that the ovule spoils very quickly when it enters the tube without previous fecundation. His views regarding the course of the spermatozoa reaching the ovum are, first, owing to the movements of the uterus and tube following the direction from the vagina toward the ovary, and, second, to the inherent power of the spermatozoa themselves.

"The statement that impregnation takes place before the ovum has reached the true uterus seems to me to be an assumption based upon insufficient evidence—indeed, upon no evidence at all. *A priori*, we may safely say that, if it is the rule, Fallopian pregnancies and the disasters which follow them ought to be much more common than they are, and I believe it to be more than likely that the real cause of this accident is the coincidence of a set of circumstances, the most important of which is the destruction or insufficiency of the ciliary movement." ("Diseases of Women," Tait, Wood's Library, 1879.)

That the uterus is the meeting-place of the ovum and spermatozoa" is a theory held by Dr. Wyder, and is certainly opposed to the views as just quoted by the most eminent of German, English and American physiologists, gynecologists and obstetricians. Wyder regards the appearance of the cilia on the uterine mucosa at puberty, and their action from without inward, as indicating that they are intended to assist the progress of the spermatozoa, while they prevent the too rapid descent of the ovum toward the cervix. The cilia covering the mucous membrane of the tubes, which are present from birth, move in a direction directly opposite, and this movement taken in conjunction with the peristaltic motion of the tubes themselves, also in the direction of the uterus, as well as the sinuosity of their passages, all tend seriously to retard the advancement of the spermatozoa, notwithstanding their inherent power of motion. (*Philadelphia Medical News*, Vol. 46, 1886.)

Regarding the function of the tubes and ovaries, Mr. Tait has proven conclusively to my mind that ovulation can and does takes place before, during, and even after menstruation ceases (menopause); also, that the changes in the ovary at puberty are simply vascular, and that those in the tubes are vascular and epithelial, and that the change of greatest importance is in the functional movement of these accessory organs—that is, the "grasping," so to speak, of the ovary by the fimbriated extremity of the tube *at only stated times*, viz., *during the menstrual epoch*. Ovulation, then, and menstruation are not necessarily coincident, for as Tait, Jackson and myself have shown, it is not always that the passage of an ovum takes place through the tube, though its fimbriated extremity is grasping the ovary, for frequently it happens at such time that there is no ripe ovisac present.

If, then, as has been shown, ovulation continues intermenstrually, when the tubes are quiescent, the question naturally arises, what becomes of the ovum when the ovisac ruptures? There is only one place it can go, and that is into the peritoneal cavity, where it perishes and is absorbed. Mr. Tait, in speaking on this subject in his work on "Diseases of the Ovaries," says: "I believe that the ovum falls into and perishes in the peritoneal cavity in by far the greater number of cases, and that the passage of it into the uterus occurs only in a small minority of the ova produced."

Accepting, then, the views of the majority of the authorties, that fecundation usually takes place either in the tubes or on the surface of the ovary, or even in the Graafian follicle, or, possibly, ash as been intimated by Parry, in the peritoneal cavity, and granting the admirable stand taken by Tait, as just dilated upon, it would seem to me that—

First. Fecundation of the ovum takes place more frequently than is supposed.

Second. That this being a fact, many sterile women—

that is, objectively sterile—who never complain of pain or ache, who ovulate and menstruate with greatest nicety and regularity, and whose general health is perfect, and such, no doubt, all of us present have met with—such women, I say, may frequently have fecundated ova, which, like the non-fecundated ova, may drop into the peritoneal cavity and perish, because the soil there is unpropitious for their development.

Third. That occasionally, but rarely, I will admit, this same peritoneal soil, if I may be permitted to use such a term, does present a favorable site for development of the fecundated ovum, and what is called "primary abdominal pregnancy" results.

Fourth. This propitious site may be due to old peritoneal inflammatory troubles, which may be so slight, indeed, as to have never given rise to suspicion of their existence. Such resting spots in the peritoneum for the development of the young fecundated ovum, though occurring not so frequently as those inflammatory changes in the tubes, causing desquamation of the ciliated epithelium, and thereby tubal pregnancy, as Mr. Tait so ably advocates, *are*, nevertheless, to *my* mind, a factor of causation of the so-called primary abdominal pregnancy.

From the physiological proofs, as already cited. I am convinced that extra-uterine fœtation can and does occur either in the Fallopian tubes (by far the most frequent form), *in* the ovary, or *upon it*, and even in the peritoneal cavity; and I must truthfully say that, in the study of any given case of misplaced conception, one of the most perplexing questions to decide is as to which class it properly belongs —whether tubal, ovarian or abdominal. This is assuredly true, not only while the patient is living, but after her death; and I can heartily endorse the views of Parry when he says that, "notwithstanding these common and insuperable difficulties which the pathological anatomist may encounter, even under the most favorable circumstances, a large number of physicians do not hesitate to classify their cases, even when their patients have been carrying the products of a misplaced gestation for years. These remarks apply not only to the statements of physicians who have observed only one case, but to those accouchers who have seen many. The result is that special treatises, as well as periodical literature, teem with statements which are decidedly unreliable and calculated to mislead those who attempt investigating this subject.

TUBAL ECTOPIC GESTATION.

By far the most frequent form is tubal ectopic gestation, ascribed usually to a number of causes, as catarrh of the mucous membrane, causing possibly a loss of the ciliated epithelium, allowing thereby the fecundated ovum to rest and develop in the denuded spot; flexions of the tubes, dilatations with hernial pouches, produced by the protrusion of the mucous membrane through separate bundles of the muscular fibers (Lusk). Constrictions from inflammatory changes, causing adhesions, obstructive catarrh, physiological aberrations, or even paralysis, etc., have all been assigned as factors.

Naturally the pathological changes taking place will vary according to the duration and behavior of the pregnancy. As the growth of the ovum continues the mucous membrane of the tube thickens, the tubes themselves gradually distend, the villi enter the mucous membrane, and, according to Bandl, "the two poles of the dicidua-like covering are closed, though sometimes the uterine end remains open and in continuity with the mucous membrane of the tube and the decidua of the uterine cavity." Henning remarks that a decidua reflexa is rare.

The villi continue in their growth, penetrating the mucous membrane to the muscular layer, but, according to Leopold, never breaking through the walls of the maternal vessels; nor are any evidences of blood to be found, as is presumed to exist in intra-uterine development, between the villi. The vascularity of the vessels of the tubes and those of the broad ligament in which they lie is greatly increased; the muscular fibers of the tubes, enlarging at first, subsequently become markedly thin by stretching from the continued and increasing pressure due to the growth of the ovum, which finally ruptures the tube, usually between the second and third months. According to Mr. Tait the most common seat of rupture is through the surface of the tube into the cavity of the peritoneum, because, as he says, "the proportion of the circumference of the tube which is covered by peritoneum is very much greater than the proportion of the circumference of the tube which is related to what is called the cavity of the broad ligament." As a result of such tubal ruptures the placenta is frequently lacerated and the hemorrhage is excessive, which pours into the peritoneal cavity, death being frequently due to shock, hemorrhage, or, if not from either of these, purulent peritonitis is apt to develop.

Associated with the rupture in the wall of the tube may be that of the ovum, with the escape of the fœtus into the peritoneal cavity, or it may be that the ovum remains whole, and in such condition falls into the abdominal cavity; should the ovum, though, remain in the tubes, which is rare indeed, and most favorable, the extent of the hemorrhage may be lessened. Spiegelberg mentions three instances where this form of extra-uterine pregnancy advanced to full term, and Hofmeier still another. In all three cases the enormous muscular development in the tubal walls was characteristic. Fatal as this form of ectopic gestation usually is, recovery may occur in case of premature death of the fœtus before the tubes give way; and even after rupture has taken place recovery is possible, owing to the formation of inflammatory false membrane around the embryo of the entire ovum. Should the tube rupture at any point not involved by the peritoneum, the folds of the broad ligament become separated by the effused blood, forming a cavity into which the ovum may fall, and either become destroyed, or continue developing up to the fourth, fifth or sixth month, when it usually dies. Then we have, according to Tait, "a group of cases in which, after suppuration has taken place, the bones of the fœtus are discharged through the rectum, through the bladder, or through Douglas' cul-de-sac into the vagina, or sometimes a lithopedion results. The minority proceed to the full time, and are removed, either as living or as dead children, from an extra-peritoneal cavity."

OVARIAN PREGNANCY.

So long ago as the latter part of the seventeenth century St. Maurice demonstrated a case of ovarian pregnancy. Since that day a number of cases of this very rare condition are now on record, as that of Granville, Porter, Kammerer, Bandl, supported by the thorough investigations of Marimus of three preparations found in the Pathological Museum of Wurzberg, which proved unquestionably the presence of gravid ovaries. In Porter's case the woman died from rupture at between the sixth and seventh week of gestation in her fourth pregnancy. The autopsy revealed the left ovary greatly enlarged, *containing* the gravid sac; the Fallopian tube on the same side was found "*floating free and imper-*

vious." In ovarian fœtation, as is usual, the cyst is void of a peritoneal investment, the walls of the Graafian follicle and the stroma of the ovary forming the envelope about the developing ovum. The chorion is in intimate relation with the interior of the sac. Subsequent to fecundation the Graafian follicle may close, and the ovum continue extra-peritoneal, or the ovum may gradually make its way through the opening occasioned by the escape of the Graafian fluid, and thus come to lie eventually, for the most part, within the peritoneal cavity. In either case, rupture of the sac takes place early, though when the sac walls are reinforced by inflammatory adhesions to the peritoneal coverings of adjacent viscera, gestation at full term may be reached.

ABDOMINAL PREGNANCY.

Primary—Secondary.

As was shown in an earlier part of this paper, ova frequently, becoming fecundated, drop into the abdominal cavity and perish, the soil being unpropitious for their further development; occasionally it happens, though, as has been demonstrated, that their death is not so imminent, and that their growth may continue for an indefinite period. Now, the pathological changes occurring in this form of "primary abdominal" pregnancy must be distinguished from those that take place in that form which is termed "secondary." In the one instance we have so minute, soft, fragile and delicate a corpuscle deposited in the peritoneal cavity that one could not well imagine any grave and inflammatory results accruing from its immediate presence. This being the case, then, the contiguous abdominal organs will not be injured by its ulterior development, because, as Cazeaux remarks, they gradually become habituated to it, and the ovule, having obtained a right of possession, "lives, grows and presents to the smooth, polished surfaces which touch it a surface equally smooth, polished and moistened at their expense, and not having occasion for any other protecting envelope, no cyst is formed," the ovum being simply surrounded by the chorion and amnion.

On the other hand, in the secondary form of intraperitoneal pregnancy, we have a voluminous product of conception suddenly thrust upon the peritonium, accompanied by large quantities of blood, wounding possibly, irritating certainly, this membrane so unaccustomed to such harsh intrusion. Here the ovum acts the part of a foreign body, soon determining an acute inflammatory process about it which possibly may form a cyst-wall made up almost wholly of plastic lymph, which completely isolates it from the rest of the peritonial cavity. If the fœtal cyst ruptures, and the contents escape from the amniotic cavity into the midst of the intestinal mass, a renewal of the inflammation occurs, and the cyst just described forms around *it*. As a rule the fœtus perishes at or soon after the time of rupture; still, there are cases recorded, especially by Bandl, where it continued developing even within the sac formed of proliferating connective tissue. With the death of the child it may be converted into a lithopedion, or, through the blood-supply of the connective tissue, it may be preserved for years in its soft integrity.

In all cases, numerous and greatly exaggerated vessels form in the cyst-walls, the rupturing of which frequently gives rise to almost instant death from hemorrhage. Sometimes, especially when the pregnancy is prolonged, these walls may become destroyed by perforating, fistulous canals running in various directions, frequently communicating with the intestines, vagina, uterus, bladder, or even with the abdominal parietes, opening directly into the external world. Through these fistulous channels the skeletal portions of a putrescent fœtus frequently find their exit; this change is undoubtedly more frequent than that the fœtus should be transformed into osseous or cretaceous substance, or even adipocere. Beside these varieties of extra-uterine fœtation, as already mentioned, Bandl records histories of the coëxistence of extra-uterine and intra-uterine pregnancies, "the latter occurring at the same menstrual period as the former, or possibly after the death of the extra uterine fœtus."—*Albany Med. Annals.*

Is the Frequent Use of Forceps Abusive?

BY THOMAS OPIE, M.D.,
Professor of Obstetrics and Gynæcology, College of Physicians and Surgeons.

An Abstract from a Paper.

THERE is a remarkable unanimity of opinion in the teaching of recent text-books, medical journals and medical societies on this subject.

They favor the more frequent use of forceps, and condemn the so-called expectant management of labor. The axiom, "Meddlesome midwifery," has beaten a retreat before the clamor for the forceps.

The name of forceps points to its most striking characteristic, its prehensile power. Three distinct eras may be traced in this branch of medicine, having their pivotal influence in the forceps.

1st, The introduction of the original forceps in 1700; 2d, the important invention by Levret of the pelvic curve, in 1747; and 3d, when in our own times, 1877, Tarnier invented the traction-rod attachments to the forceps.

Baudelocque arranged methodically the pelvic positions and presentations in 1791. Prior to that time the sovereign powers of the forceps were greatly abused. Their introduction was a matter of haphazard and convenience. Even in the days of Ramsbotham there was a bitter controversy as to which was preferable, forceps or craniotomy.

A recent writer says: "The forceps are simple in their construction, easy of application, wonderful in power."

The successive stages of their development have, on the contrary, made them far less simple in construction; they have a wider range of application, and wonderful powers for life destroying as well as life saving.

All surgical operations are dangerous; it is equally true that elements of danger lurk about all cases of artificial labor.

To substitute traction for contraction, to introduce and use instruments in the genital tract, indeed to substitute art for nature's peculiar and inimitable methods, is always dangerous.

The most unanswerable argument against frequent use of forceps come from the gynæcologists. Good surgeons are relatively few, and delicate and dangerous operations in that branch are relegated to specialists among them; but most practitioners think themselves able to cope with any forceps case.

If skill in the use of forceps did not exist prior to Baudelocque's classification, how can we accord this virtue to operators with the forceps in these days, who are ignorant ot the fundamental principles and admirable system upon which the present science of obstetrics rests?

The opportunities for the student of obstetrics are meager, and, granting he is thorough in the theory or this department, he forgets it before he is entrusted with a practice. No wonder if he makes a medium-rate obstetrician, and sneers at the mechanism of labor.

To determine between the high forceps operation and version, to diagnose or rectify position above or at the brim, to apply the forceps accurately, and conduct safely the little passenger through the passage-way, are among the great achievements of medical science.

The high forceps operation is a critical one, and the operator should be chosen with as much care as for an ovariotomy.

The low operation is not so simple as to be left to "any tyro."

For practical purposes it answers to designate all kinds of forceps in the order of their seniority of invention, as follows: The straight (Chamberlyn), curved (Levret), and traction-rod (Tarnier).

It is high time to turn a deaf ear to the many names of individuals attached to forceps because of various modifications of lock, blades or handles. They obscure the horizon of the subject; they distract attention and confuse the object, which, like that of the practice of medicine in all its departments, is life-saving cure.

There is but little need for straight forceps. The traction-rod forceps alone serve our purpose with satisfaction at and above the superior strait.

The welding and unification of the traction-rod and curved forceps in Tarnier's latest style well-nigh disarms criticism. It is a great achievement, one on which we may congratulate this age.

Think of the struggle and pity the sufferings of the man, woman, and child as the operator toils away with a straight forceps at the inlet. The pelvic curve added would only qualify, not remedy, the situation.

Still another modification and science has triumphed. The traction-rods, with relative ease and far less force, pilot the head through the upper narrows, and thence into the safer region of the low operation.

If we could only persuade operators of the salvation of traction-rods, covering all the indications for traction at the superior strait; of making traction, during the pains, rhythmical, direct, slow; of supplementing, not superseding, nature; of utilizing all the vis-a-tergo, and only just enough of his power to bring the combined forces to the norm, and that all above that is abuse.

If we could get them to be careful, to halt, prospect, and protect the sphincters of the uterus and vagina, and to beware of rapidly unloading the organ, we would have a reform that would be as life-saving stations all along the passage-way.

I am fully convinced of the ability of the forceps to help. I protest that they should not be used regardless of the factors of delay. I plead for their judicious use.

As to the indication that the os should always be dilated or dilatable, judgment often goes to protest.

About two years ago I was in attendance upon a most tedious, nervous and impatient primipara in whom the os was only three-quarters dilated. After a boisterous struggle of two nights and two days, slowly, almost imperceptibly, the dilatation increased. The patient's qualifications for abuse, however, grew more rapidly; I came in for a large share of it. She demanded chloroform and instrumental aid; the husband seconded her claim. The traction-rod forceps were applied; she was delivered in two hours under chloroform. A febrile trouble and tardy convalescence ensued; some months afterward she became the patient of a clever gynæcologist. His operation told the tale of the "blundering obstetrician." I have never had an opportunity since to call the patient to an account.

One of the most important requisites for a good obstetrician is "to know how to wait and do nothing." In the first stage he must wait a long time, especially in primiparæ, before using forceps; indeed he is not warranted in resorting to it except the mother or child is in jeopardy.

Far the most frequent use of forceps is in the second stage, and we are told "any tyro" can perform this operation. Nature can generally do it better and safer, if not so quickly. Time and patience can not be too much extolled as virtues during the whole labor.

Let the attendant occupy the position of "watchful expectancy;" remove reflex disturbance, sustain by proper food, guard against fatigue, secure rest, assure and cheer, utilize the simpler methods of assistance—let nature do all she can before we resort to forcible measures. I have lately limited the number of my forceps applications by manual pressure, according to the plan advised by Kristeller, of Berlin.

This and other manual helps are more in accord with nature's laws, and should be made use of. Instead of using forceps to curtail the sufferings of labor, we had better consider the very great efficacy of morphia, chloroform and chloral.

As an isolated indication, it is doubtful whether pain ever warrants forceps use, nor would such cases necessarily end with less suffering after immediate delivery.

It is a common occurrence for women to demand that the accoucheur shall do something to help the physiological phenomena of labor. Dr. Robert Barnes denounced this as old and bad practice.

Anæsthesia is the best treatment for cases of excessive nervousness and emotionalism in labor; not the forceps, as has been advised. Chloroform, during the pains, often makes labor of this sort more normal.

The nervous element is often misleading; it is not always the patient who is most noisy who suffers most, nor is it safe to be influenced by her cries for more chloroform or for the forceps.

The loss of time by an accoucheur is not to be accepted as a warrant for resorting to instrumental delivery. We fear in these times of goaheaditiveness, this is a common source of above abuse.

The forceps is a life-saving instrument for both mother and child, whether we are dealing with the first or second stage of labor, provided they are used judiciously and skillfully.—*Annals of Gynæcology.*

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Illumination of the Larynx and other Body Cavities by Transmitted Light.

At the meeting of the Medical Section of the Schlesischen Gesellschaft fur Vaterlandische Cultur, at Breslau, October 26th and November 9th, Professor Voltolini read a paper upon this subject. We make a few extracts from the report in the *Wiener Med. Wochenschr.*, Nos. 47, 48, 49, of this year.

"I not only hope but am convinced that this new method of examination, which I present to-day, will sooner or later come into common use, and will be of great service in distinguishing benign from malignant growths in the larynx, and will also be of value in physiological investigations.

"This new method consists in the illumination of the larynx and other body cavities by transmitted light. In the larynx the light is directed through the tissues of the neck, while the laryngoscopic mirror is passed into the unilluminated pharynx.

"By this means not only are the separate. parts of the larynx illuminated and visible as by the usual method, but the whole larynx is illuminated through and through. Everything can be examined. The vocal cords are perfectly transparent and the slightest abnormality upon the surface or within the tissue can be readily seen. In one sense it is possible to examine the tissues in the living body as with a microscope—since often in microscopic examination the main object is to see into the tissues by means of transmitted light. . . . . As above stated this method is especially valuable for the recognition and differentiation of benign and malignant growths in the larynx.

"Growths frequently occur in the ventricles of Morgagni; these can not be recognized by the usual laryngoscopic methods until they protrude from the ventricles; by means of transmitted light they can be seen when still entirely within the ventricle.

"At the present time Waldeyer's views upon new growths are generally accepted, viz: that in cancer epithelial prolongations grow into the underlying tissue—briefly, that in malignant tumors the growth extends into the healthy tissues, while in benign tumors the growth is outwards. I have not now a case of cancer of the larynx under observation, but have several cases of benign polypoid growths upon the vocal cords, and I can assure you that the vocal bands appear clear and transparent and the polypi grow outward from the mucous membrane into the lumen of the larynx.

"The illumination of the larynx by transmitted light was first suggested and tried by Czermak, the inventor of the laryngoscope, and endorsed by Gerhardt and Stoerk. Czermak said ('Der Kehlkopfspeigel,' 2d edition, Leipsic, 1863, p. 31): 'I believe that in this method of illumination I have discovered a means of observing changes in the vertical thickness of the vocal cords, both physiological (register of the voice) and pathological, and that it will be a means of examining the deeper tissues directly. The usefulness of this method in rhinoscopy is very limited '

"In reference to the last sentence I wish to say that the method proposed by me is of very great service in rhinoscopy.

"Soon after Czermak's publication Semeleder discouraged further studies in this direction. In 'Die Laryngoskie,' Vienna, 1863, p. 25, he says: 'This method of illumination seems very plausible, but I do not think it is capable of practical application; for in cases where the examination of the air passages is easy, a much better view is obtained by reflected light, and in cases where obstructions are present it will be fully as difficult to obtain a reflected image of the parts illuminated by transmitted light as by reflected light. Moreover, transmitted light is never sufficiently intense to afford a satisfactory view of the details.'

"Semeleder seems to have misunderstood the principle involved—and not to have tried the method himself; for illumination from above does not give the same definition as that given by transmitted light—just as under the microscope reflected and transmitted light give entirely different images, the one showing us only the surface, the other the structure within the tissue. Further, it is often possible, with transmitted light to obtain a good image of a larynx where it would be impossible to see anything by reflected light. The author demonstrated this point in the case of a boy with enormously enlarged tonsils. A good view of the larynx was obtained though the tonsils nearly hid the mirror—just as any cavity lighted from within can be fully viewed through an opening much too small to admit sufficient light for its illumination. Since Semeleder's publication, his method has scarcely been mentioned by any writer upon laryngology, although Professor Voltolini has regularly demonstrated it to his students.

"Heretofore the use of sunlight only has been practicable for this purpose, and this is the chief reason why the method has not grown in favor. For the sun is not always shining, and we are limited in our opportunities for making examination. Moreover, direct sunlight is not sufficiently intense; it must be concentrated upon the bared skin of the neck at the risk of burning it. The difficulties in manipulation are also considerable: The light must be directed upon different sides of the throat successively; any movement during the examination on the part of the patient or of the condensing mirror leaves the larynx dark. The position of the patient, with the mouth open and the chin depressed, is a further disadvantage, and if the patient wears a chin beard and if in addition to this it is necessary to draw the tongue forward, holding it with a napkin, the obstacles are multiplied, and great expertness is needed to obviate them.

"With the discovery of the incandescent lamp by Edison, this method of illumination has taken a different form. We now have an adequate light that can be used at any time, and upon all patients.

"The lamp for this purpose is prepared as follows: The back of the lamp is silvered to serve as a reflector. A small shoemaker's globe, filled with cold water, is adjusted in front of the lamp and serves the double purpose of concentrating the light and cutting off the heat. The lamp and ball are held in a metal case. For use it is adjustable upon the neck, and the observer is free to make any manipulation or to put the patient in any position he desires."

In a case demonstrated before the society, the whole larynx was perfectly illuminated, and the pharynx, even, was partially illuminated from top to bottom.

A smaller lamp that can be held in the mouth, is used for illuminating the tissues and bones of the face. It is described more fully in the author's work on "Diseases of the Nose," just published.

Professor Voltolini uses three styles of lamps; a large one, 4 cm. in diameter, arranged as above described, for illuminating the larynx; one of medium size, to be held in the mouth, for illuminating the face; and a small lamp for introduction into the naso-pharyngeal space. He predicts that this method of illumination will be used in examining other cavities of the body, and mentions particularly the stomach and the uterus.—*Med. Journal and Examiner.* F. S. J.

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Obstetrical Society of Philadelphia.

Stated Meeting, Thursday, December 6, 1888.

THE PRESIDENT, T. M. DRYSDALE, M.D., IN THE CHAIR.

DR. JOSEPH PRICE read a paper on

TUBAL DISEASE A PRIMARY CAUSE OF INTESTINAL OBSTRUCTION.

In reporting cases he had repeatedly called attention to the frequency of adhesions occurring between the uterine appendages and some part of the intestines, and his present purpose was to emphasize the importance of recognizing the danger of obstruction of the intestine arising from inflammatory conditions of the pelvic viscera. In the cases operated on the past year, in more than 15 per cent. there were noted "dense, firm adhesions" between the intestines and uterus and appendages, malignant cases not included. In every case, with one single exception, the inflammatory conditions causing the adhesions apparently originated in the uterine appendages. First, as to the form or kind of obstruction likely to occur. The inflamed serous surface of the diseased tube, or ovary, coming in contact with a loop of intestine, or an edge of omentum, provokes inflammation there, and with characteristic promptitude these surfaces cohere. If the process is not severe and of slight duration, the adhesions may disappear as promptly as they occurred, by the enormous absorptive power of the peritonium, hastened by the mild influence of the peristalsis of the bowels. If, however, the inflammation is severe or assumes a chronic condition, these adhesions gain in extent and strength and give rise to all the variety of conditions classified by Treves as "strangulation by bands." In most cases where these adhesions occur there is a history of constipation. It is probably due as much to the pain caused by defecation as to interference by the condition. Again, the pain is often so great as to mislead the physician into thinking that a more virulent inflammation exists than really does. But the pain is not always proportionate to the amount of mischief. I have seen cases in which a mere omental adhesion has caused most agonizing pain. For instance, I recently saw a case in consultation: a woman who had had the appendages removed for backache some time before, and who suffered excruciating pain, especially on defecation. In this case the only lesion found was the omentum firmly adherent to the original incision. The omentum here was much elongated, and the transverse colon was dragged below the level of the umbilicus. In like manner I have seen the omentum adherent over the entire pelvis, dragging the transverse colon so out of place that a twist or kink of the bowel could be very easily formed. It is not at all rare to find the vermiform appendix glued fast to the uterine appendages, while almost any loop of the small intestines may become adherent to the inflamed pelvic viscera. As I have said, these adhesions vary in extent and density, from those that will tear like wet tissue paper to those so well organized that it requires the scissors to release them, and it is not rare in pus cases for the bowel to be almost gangrenous about these points of adhesion and, in fact, to tear through. That adhesions do not cause complete occlusion at the time of their formation oftener than they appear to is no reason for regarding them lightly, for Mr. Treves tells us in the series of cases he studied that the average duration of the interval between the causation and the obstruction was three years; the shortest period being five weeks, and the longest twenty-one years. In view of these general considerations it is hardly necessary to insist upon the release of the intestine wherever and to whatsoever extent adhesions exist. For if the surgeon leaves adhesions when he closes the abdomen, he leaves a probable cause of future serious trouble.

Dr. William Goodell said that his experience in ovariotomy led him to say that it is a mistake to postpone the opening of the bowels to a late period. He used to follow the old plan of not giving a cathartic until the eighth day, but he was confident that he had had death result from intestinal kinks, from adhesions, making it impossible for the bowels to be moved. He now gave an aperient or an enema on the fourth day, and earlier if any symptoms, such as vomiting and tympanites, present themselves.

Dr. B. F. Baer said that once he had kept the bowels confined after laparotomy, but now he had them moved on the second or third day, rarely as late as the fourth day. Allowing a pint of warm water to flow into the rectum facilitates the passage of flatus and fæces. He had a case four years ago in which very serious collapse occured at the end of the second day. Stercoraceous vomiting set in and large quantities of flatus were passed by the mouth, but none by the anus. These symptoms were thought to be due to obstruction, and reopening was considered, but not done. The patient recovered, although she did not pass flatus for five days. Should such a case occur again he would open the wound, and would have the indorsement of most operators for so doing. Large doses of salines are advised in such cases, but he wondered if there was not some danger of rupture of the bowel in these cases of adhesion after serious operations, and he related a case. Dr. Price had referred to two cases where he reopened the abdomen for pain, and found the omentum adherent to the line of incision. He knew of no better way to prevent this accident than the early use of laxatives.

Dr. Wm. L. Taylor read a paper on

FIXED UTERI.

In looking over his case-book he found the remark, "uterus fixed," so often noted, so often underscored, as much as to say "here again," that he fain would ask how many of these cases were, in their inception, recognized as cases of peritoneal inflammation. In a number the note is made, "patient had attack of inflammation of bladder." "Inflammation of bowels" has been of alarming frequency, whilst "congestion of the liver" makes him wonder at the special degree of sensibility of that organ in women. In a series of cases where the lymph deposit seemed to be the most diffused, a positive history of an active and acute inflammatory trouble could not be obtained. There was only the history of a continued abdominal pain and tenderness, dating from an abortion, from heavy lifting, seldom from normal labors, and presumably never from gonorrhœal infection; seldom—I might say never—have I had perfect success in my efforts to trace the cause of this infection. The history of the husbands, as to the existence of a gonorrhœa or gleet, at the time of commencement of pelvic trouble, is, in the vast majority of cases, worse than uncertain. In several of the subacute cases the only ascribable cause appeared to be indirectly, if not directly, the effort to prevent conception. Freedom from the possibility of, at least, paternal cares, leads to an amiable weakness, and coition follows coition in quicker succession than the law of conservatism would recognize, and, plus the menstrual congestions, which now even anticipate, without the restful periods of pregnancy and lactation, congestion and inflammation of the peri-uterine tissues follow. That this is as immediately the cause of the fixed uteri, the thickened and enlarged ligaments and tubes, and tender ovaries, as is gonorrhœal infection, even in prositutes, I am inclined to believe. Where the deposits of lymph were more localized or larger in quantity, seeming as if it had been poured out quickly, and had by gravity centered itself around the uterus, there were histories of acute, well-marked attacks of cellulitis or peritonitis. The causes were difficult labors, with badly lacerated cervices, these lacerations extending through into the cellular tissue; and also criminal abortions. In these cases, how often traumatism and how often septic poisoning was the exciting cause it is impossible to say. Catching cold while menstruating, falls, and various other accidental causes were among the number. The average physician, as soon as the patient is up, and out of bed, shakes himself by the hand and says, "I have cured my patient." But he hasn't!

There is still the important sequel to deal with, the lymph deposits. In fully three-fourths of all the cases the body of the uterus has become fixed in retroflexion, even in multipara. Just as soon as the uterus feels the stimulus of congestion or inflammation of surrounding tissue, it becomes turgid and heavy, and sinks decidedly lower in the pelvis, until the cervix is near the vulvar orifice, and, following the curve of Carus, the fundus is retro-displaced. Here it is, as it were, frozen in, fixed immovably. All around it is a mass of inflammatory lymph, becoming more dense and resisting as organization advances. In the center of this the sound probably indicates the uterine body with a measurement of 3½ inches. The cavity is tender and the cervix softened, congested with venous blood. Now, this deposit varies greatly in quantity as the inflammation has been, by judicious treatment or by nature alone, limited or allowed to involve a great extent of peritoneal surface. The possibility of determining the amount of lymph deposit and the degree of fixation by bi-manual examination seems to me to be one of the few certainties in gynecological practice. A uterus which is low in the pelvis and which can not be raised to the normal line, and a fundus which is retroflexed and can not be reposited, with the other evidences, bi manually, of thickening and deposit, can not but point to the certainty of previous inflammation. A sterile uterus and a fixed uterus seem to be almost synonymous.

The need of shortening attacks of pelvic peritonitis, aborting them if possible, can be only appreciated by those called upon frequently to treat the sequelæ.

If these are thoroughly treated the amount of lymph thrown out is small, and probably will be absorbed almost as rapidly as it was thrown out. But we meet a case which was treated by the "other doctor around the corner," and the uterus and its appendages are imbedded and immovable. Now what are we to do? The great object is to get rid of as much of this effused matter as we possibly can. The older and more thoroughly organized this becomes, the less chance there is of rapid and complete absorption. So the moral is, commence early. It is going to do one of three things: undergo absorption, break down and form pelvic abscess, or become organized, acquiring an adventitious circulation. In a case of recent or comparatively recent deposit he commences treatment by correcting the digestive tract, getting the stomach, liver and bowels in better condition.

and surface circulation is stimulated by warm baths and frictions. He then gives mercuric cholride, with the iodide, commencing with small doses frequently repeated, and gradually increasing the dose and lengthening the time. Locally he relies upon the abdomino-vaginal galvanic current and gentle or more decided uterine massage, as there is great or little tenderness. This uterine massage he prefers in cases of long standing, where the tenderness has disappeared, but still used carefully where there is tenderness, he finds it beneficial. Every other day, or twice a week, make steady pressure upon the fundus of the uterus with the index finger of the left hand in the rectum and upon the cervix and body of the uterus with the right index finger in the vagina. This pressure is kept up for two or three minntes, gradually trying to force the body upward and forward. Then efforts at lateral movement for the same length of time. This massage is followed with the continued galvanic current, using the abdomino-vaginal method. For the breaking down of pelvic lymph he has not used eloctro-puncture, preferring the slower and as certain absorption by the stimulation of pelvic circulation. Where there is tenderness he uses the positive pole in the vagina and the negative over the abdomen for the first three or four applications, and it is marvelous how rapidly this tenderness disappears. He then reverses the poles, using the negative with a ball or small crescent-shaped electrode in the vagina. These *séances*, including the massage, last for about fifteen or twenty minutes. The strength of current averages about 25 to 30 milliampéres. After this is over he frequently packs the fornix with wool, introducing a small ring pessary to keep the wool as much as possible in position. After he gains a certain amount of mobility he introduces a Smith-Hodge pessary, small at first, increasing to a more suitable size as the uterus rises to the normal line. Tincture of iodine to the fundus of the vagina.

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Sanitation.

BY R. R. HOPKINS, M.D., RICHMOND, INDIANA.

Original Article.

THERE has been much said on this subject in the last few years; but can there be too much said on Sanitary Science and Hygiene? First, in relation to our water supply: This is often neglected and overlooked by a great majority of our people, as well as by many of our local Boards of Health. Sanitary Science is principally concerned with water courses, great and small; with the lakes through which they flow; with springs and fountains; with the veins and sheets of water which, though buried beneath the surface, are still accessible to man, and from which he draws his daily supply.

Our water supply is derived from the rain-fall. I will not ask how the water found its way into the air. We know that fountains, rivers and lakes are alike fed from the clouds; and that man is wholly dependent for his supply of this vital element upon the rain that comes down from heaven and forms the stream which flows past his feet, which is itself fed by floods that fall a thousand miles away; and whatever mystery attaches to subterranean waters, we may be sure that by a long enough circuit we can trace every drop back to the clouds.

The rain that falls upon the face of the earth has various fortunes. A part of it (storm water) washes the surface, and carries away from it in suspension many of its finely-divided particles; dissolves what it finds easily soluble along its path; is gathered into open drainage-channels, and, forming part of some river system, hastens to the sea. The springs that issue from the mountain glen, which become, to every one who has ever stooped to drink of their cold and crystal waters, unapproachable standards of excellence, have very often such a history; but among the substances which the slowly sinking sheet of water traverses, there are many of a much greater degree of solubility. The compounds of soda and potassa, of magnesia and lime, of phosphorus and sulphur and iron, are taken up in various but comparatively large amounts. Lime and magnesia are the most common and abundant of all. Absolutely pure water does not seem so conducive to life and health as water containing a certain proportion of these salts. The presence of six. eight, or ten grains of the salts of lime to the gallon is counted by high authorities as a definite advantage in several respects. Water containing more inorganic matter than this is to be counted unfit for use as drinking water. The presence of an excessive amount of lime and magnesia in spring-water has been quite definitely connected with goiter, and thus with cretinism. When the water dissolves any notable quantity of other substances than the strata may chance to contain—such, especially, as compounds of potash, soda, iron and sulphur—the emerging springs are termed mineral springs, and account is made of them for medicinal purposes.

But we will not dwell here now to discuss this group of natural waters. There is, however, a very distinct class of substances which rain-water finds in and beneath the soil, and which it has power to dissolve; namely, substances of organic origin derived from the vegetable and animal kingdoms. All soils contain a greater or less proportion of vegetable matter. There are large areas which consist, to a depth of many feet, of little besides half decomposed vegetation. The products of decaying vegetation are soluble, as is shown in the coffee-colored streams that flow off from peat bogs. So, all spring-water that descends through tracts covered with vegetation, and especially that which is derived from cultivated land, contain these products of decaying vegetation.

Such water may not be unpalatable, but can scarcely be said to be wholesome. Decomposed vegetation exerts a poisonous influence when it escapes in the dry way into the atmosphere; but in aqueous solution it is comparatively innocuous. It is different with substances derived from the animal kingdom. These turn the drinking water, with which they are mingled, sometimes into slow and subtle poison, and sometimes into agents of swift destruction. Two dreadful scourges of the race, typhoid fever and cholera, are often particularly connected in origin, and much more frequently in transmission, with the quality of drinking water. It has been abundantly and conclusively proved that drinking water contaminated by the excreta of persons suffering from either disease is a common carrier of their germs.

The rain-fall flows over the surface in superficial drainage, or disappears beneath the surface, sinking slowly and quietly through beds of sand and gravel and gravelly-clay, and through solid rock, until it reaches an impervious layer, the outcrop of which becomes, whenever it is found, a horizon of springs, and the surface of which becomes, when the beds that hide it are pierced by shaft or drill or driven tube, a reservoir for wells. The water depended upon for daily use is, in the great majority of cases, obtained from wells.

What is a well? Generally it is a cylindrical shaft sunk to the surface of a water-bearing bed. As we have no other purpose in sinking the shaft but to reach the water reservoir, we are prone to think that the shaft confines itself to the simple and useful office of furnishing a way to the water. But not so; there is another office which, in the nature of things, it must discharge; but if the pit be named a well, it does not thereby lose this power of drawing water from the area adjoining it. The well, then, is a vicarious drain—and often an effective one—for the ground about it; a part of its regular supply of water is close at hand, but how far do we need to go to find the balance?

Not so far as we sometimes think. There is a great deal of mystery in the minds of many in regard to subterranean water, much of which would be dispelled by a little thought on this subject, as well as a little mathematical calculation. We will suppose the annual rain-fall in Indiana or Ohio, for instance, to be forty inches: every square rod of surface must receive about 6,700 gallons of rain annually. Supposing two-thirds to escape as surface drainage, a rood would still furnish 90,000 gallons to the reservoir below. Reduced to another standard, we would find more than seventeen tons of water descending through this area. Remembering the surface immediately about the well, we may look beyond the door-yard for the source of our fountain, but we must hold fast to facts. The yard is a part of the porous surface of which we have spoken. That the rain descends "upon the evil and the good," is as true for soils and surfaces as for their owners. The rain disappears below the surface, and there is absolutely nothing to prevent the filth-soakage of the yard, with all its abominations, passing, by a short course, to the well. Nothing to prevent? there is everything to make the result inevitable! This surface-contamination of wells is no problematic and possible source of infection, it is actual and imminent.

When we are searching for the cause of a disease how often it is said to us by the good people, "Our well is all right;" or, "Our spring-water can not be contaminated—it has been in use for many years;" but we prosecute our search; one dark corner of the premises still remains to be considered; we see a very filthy place in the yard; or we see, not far distant, a privy vault in a bad condition; or we see the inmates of the house allowing filth to accumulate about their doors or their alleys, that is carried, by the surface-drainage, direct to their well, spring or cistern. In this way our water supplies, and reservoirs that supply our cities, both great and small, are infected with diseased germs. Then, we also should look well to the ice we use, as much of it is frozen from very impure water.

Again; we see dwellings built down upon the ground; no ventilation under them; everything moldy and damp—even water standing under the house, and no drainage. The cesspools are generally uncemented pits, dug out in the porous beds of which we have been speaking. That these beds do not lose their porosity because turned to such a purpose, and known by such a name, is evident from the fact that these reservoirs of impurity so seldom overflow. Their liquid contents dissappears, where does it go? Obviously, where all surface water goes, to a lower depth; to mingle with the great sheet beneath, from whence our supply of drinking water is drawn; or, if a draining pit, sunk two or three times its own depth, is at hand, to that pit it will hasten by the shortest routes—even though we call this pit a well. It is physically demonstrable that, in multitudes of instances, the cesspools feed the wells: the additions to the cesspools of one day are pumped from the well on the next; the great law of habit applies to underground waterways no less than to human character, where the water goes one day, it is likely to go the next; direct channels of communication will be established to meet the daily demand. In some instances, a marvelous rapidity is found to exist. A case is recorded in which the chloride of lime was thrown into a cesspool, and the adjoining well instantly yielded chlorinated water. Do you ask, What are the vaunted filter beds doing all this time, while the wells are being fed from these vile sources? I answer, They are doing their appropriate work steadily and well; they are clarifying all of the water that flows through them. It requires but a few feet of these natural filters to thoroughly remove the solid particles contained in the water when it enters them. They generally remove both the odor and color, also, from the surface of the water. In some respects, they effectually purify water—give them time enough, and they will transform the foulest and most noisome sewage-water into the crystal springs which poets celebrate in immortal verse, and which even religion takes as the type of its best gifts to man; but time they must have, and they can gain time only by the intervention of sufficient distance between the points of supply and delivery. A city or town well may give no warning of its venom; its waters are refreshingly cool, for they have come from a sufficient depth; they are clear and sparkling, for they have been strained through a filter adequate to free them not only from solid particles, but from all color, also; they may even give no odor—at least, those accustomed to their use will detect none—and yet they may be ladened with the deadliest pestilence.

Where, then, shall we look for a proper water-supply? To our reservoirs supplying our cities; to wells and springs, certainly, where they are properly located, and above all, where they are properly guarded against performing the vicarious duty of discharging sewage. Roof-water gathered in properly constructed cisterns, and drawn for use by properly constructed apparatuses, is always safe. Running water is generally safe, but even this may be a carrier of poisonous germs before it becomes purified by this great cleansing and disinfectant process of running and encountering light and air—the wonderful transformatives; the mightiest of terrestrial forces: and yet the mildest.

"Am I my brother's keeper?" is often asked by selfish men in every age. Sanitary Science answers, "Yes; unless you keep your brother, you can not keep yourself; you may leave him to live and die, like a brute—in a worse condition, even—but 'no man,' not even the loathsome beggar, 'liveth or dieth to himself;' the pestilence which he breeds may come on the wind betwixt him and your nobility, and smite you in your purple and fine linen." The responsibility is at our own doors, the curse does not come causeless. When, a few years since, the cholera was approaching the shores of the English dominion, the clergy besought the head of the government to appoint a day of fasting and prayer, that the people might ask God to be gracious and turn away his threatened wrath; the Premier gave their piety a wholesome rebuke by advising them not to waste their strength in fasting, but to spend it in cleaning. The Premier was right; and the result showed he knew more of the mind and the ways of the Lord, in regard to cholera, than those who claimed to be his messengers. To obey is better than to sacrifice. We have fallen upon evil days. When the pestilence smote the camp of the Greeks "far on the ringing plains of windy Troy," it was the silver bow of Apollo that wrought the evil; and through all of the Christian ages, even down to our days, it is the hand of God that has been charged with all visitations of disease. But Apollo is dead; and God forbids us any longer to misinterpret his providence; and we, alas! must bear our own burdens, and, for a multitude of our diseases, at least, must accept the humiliating explanations which are furnished by our ignorance, our self-indulgence and our laziness.

Another unsanitary object often found in dwellings is the wood-box, generally placed behind the stove, the collection of chips and dirt and decomposing wood, on being stirred up, emits an odor decidedly unwholesome in its nature. Another is the carpet on the floors. There should be no carpet on the floor of a sleeping room, except a single strip by the side of the bed to prevent a sudden shock to the warm foot by coming in contact with a cold floor. Carpets collect dust and dirt and filth and dampness, and are the invention of laziness to save labor and hide uncleanliness. They breed disease. Again; the wall paper on our walls. The low forms of life that are constantly breeding are often intimately connected with the development of serious diseases; we should remove everything from our residences, both outside and inside, that is likely to form foul gases, especially in the hot summer months, as heat and filth form deadly gases as well as bacteria.

Cold neutralizes or destroys these formations generated by heat; the colder the outside air is, the purer it must be, and, therefore, more healthful and invigorating. Not only is it more healthful in consequence of its freedom from impurities, but also from the concentration of its life-giving property, because air is condensed by cold—it is packed, as it were, more solid—so that even supposing two cubic inches of air equally pure, one at the equator, the other at the poles, the one at the poles has a much larger amount of oxygen, the great life giver and purifier of the blood. How important it is for us, then, to look well to our ventilators so as to give our dwellings good air; as we all realize the fact that the most all-prevailing cause of increased sickness and death in cities and towns, in warm weather, is the breathing of an impure and vitiated air. The most uncultivated know that there are "smells" connected with places in summer which are not noticeable in winter. Many persons aim to have the rats about their premises killed with poison before the warm weather comes on, so as to avoid noisomeness about the premises. Hence, it must be set down as a practical fact, that warm weather generates odors which make the air impure; the breathing of which will always induce disease sooner or later, and more or less fatal, according to the degree of impurity and the duration of exposure to it.

As double the number of persons die in summer time, in the crowded parts of a city, compared with the death rate in less densely populated districts; and as the poorer classes are the most crowded in their habitations; and as poverty, filth, laziness, and uncleanness go together, always and everywhere, it is proof positive that hot weather, acting upon unclean habitations and surroundings, vitiates the atmosphere; and these conditions constitute the real overshadowing cause of the premature deaths, sickness and pestilence which pervades cities in summer time. Hence, the practical inference is, that, to prevent much of these calamities, all that is necessary is to secure a greater degree of cleanliness in person, in the houses, cellars, kitchens, backyards, streets and gutters.

The supply of air is practically without limit—an immense ocean of it, many miles in depth, surrounds the entire earth. Perhaps it is largely by reason of its very abundance that man so commonly overlooks or disregards its great value. However this may be in the higher civilization which he creates, and which carries him onward and forward, he neglects frequently to seek, in the first place, localities in which the air is naturally most pure and most favorable to health and life; and by surrounding himself with elegant, but almost impervious walls, he shuts out the pure air, and breathes over and over again the small measure he has closely imprisoned; or, he makes foul that near his dwelling, by excremental waste matters, chiefly from his own body; or by the products or refuse of the occupations by which he lives—or, too often, but partly dies.

The impurities which find their way into the air are very numerous, and may be in the form of either gases, vapors or solid particles. But a wonderful series of processes goes on continually in the outer atmosphere which preserves the air in most localities in a state of comparative purity. It is for the most part in enclosed spaces, rooms, schools, shops, factories and close yards, where these purifying processes are not and can not be in full operation, that the air becomes so impure as to frequently be quite unfitted for the purposes of respiration; as it likewise does, too, near collections of decomposing waste organic matters, which rapidly foul the air.

Many of the impurities in air can not be detected by the sense of smell, nor of taste; and hence they may be inhaled without knowledge of it on the part of those who breathe them. Other impure substances may be smelt or tasted at first, but after a little time if they remain in the air the nerves of smell and taste lose their delicacy, and do not recognize the impurities. Air may be rendered practically impure, or unfit for the purposes of respiration, by a change in the proportion of its natural constituents; as by excess of carbonic acid; or, a deficiency of oxygen. Again; the impurities in air may be divided into suspended matters—which float about in the air and are wafted hither and thither by winds or currents of air—and gaseous matters, which quickly mingle with the air of the suspended matters. Some of the particles reflect and scatter rays of light, and thus frequently become visible, and are familiar to every one; as when seen like fine moats in the course of a ray of light passing through a dark room. These fine, countless particles, which are so light as not to subside in air, and which we thus see frequently in a ray of light, are almost universally diffused, everywhere.

As has been shown, by Tichborne and Tyndall, by the exhalations from the sick the air is vitiated more rapidly, and rendered more noxious, than by those from persons in health. This is especially true as regards all diseases, but more especially the specific, eruptive fevers which implicate the skin and mucous linings of the air passages, as in small-pox, scarlet fever, measles and the like; and also as regards diphtheria, erysipeles and some diseases of the lungs, the specific contagiums of other contagious diseases are doubtless given off by the skin and lungs, and pass into the air, which then acts as a medium by which others receive the disease. In diseases with certain puruleut discharges, putrefying particles and pus-cells are thrown off into the air, and may give rise to most serious specific disease in those inhaling them. Again; the effects of breathing breathed air. The effects of breathing air which has become decidedly offensive to the sense of smell from containing the fœtid organic matter, carbonic acid, and excess of watery vapor exhaled from the lungs and skin, are very marked in most persons; the symptoms are frequently languor, heaviness, headache, and sometimes nausea and febrile symptoms, which may continue for a day or two, when, the air becoming still more impure from these causes, it soon destroys life; or, if the persons survive, they suffer from a sort of "putrid fever," with boils and other evidences of affected nutrition.

Baudelocque, a celebrated French physician, asserted long ago that the repeated breathing of the same atmosphere is a primary and efficient cause of scrofula, and that hereditary predisposition, uncleanliness, want of proper food and clothing, cold and humid air, are, by themselves, non-effective; he says that invariably it will be found, on examination, that a truly scrofulous disease is caused by breathing air vitiated by respiration, and that it is not always necessary that there should be a prolonged stay in such an atmosphere; often, a few hours each day is sufficient, as sitting in a close room, or sleeping in a confined bedroom. Many of the pupils at a school in Norwood, England, some years ago, fell victims to scrofula, and on investigation it was concluded that insufficient ventilation, and the consequent atmospheric impurity, was the cause.

The most frequent cause of death in pulmonary consumption is, without doubt, developed by respired air. A large amount of evidence has been collected from various sources which go to prove this. Twenty years ago, consumption was very prevalent among the British soldiers. A Sanitary Commission, consisting of men of the highest standing, after investigation, declared it was caused by overcrowding and want of ventilation; when more space in barracks and better ventilation were provided, on the recommendation of the Commission, the number of cases of this disease materially diminished. The royal navy, and the civil population of other countries, as well as this, have afforded abundant statistical evidence to establish this. Like evidence is also afforded by animals, as the monkeys in zoölogical gardens, and cows and horses in close, unventilated stables. There is a more rapid spread of some specific diseases, such as small pox, scarlet fever, measles, and the plague, typhus, etc., in an atmosphere vitiated by the organic vapors and particles given off from the lungs and skin. This may, it appears, be owing to either one or the other, or all, of three causes; viz, to diminished vitality, or vigor and powers of resistance to disease, from the defective nutrition following exposure to such an atmosphere; to the impurities in the blood and the fluids of the body, consequent upon such exposure, which impurities form the soil in which the contagious particles of disease live and flourish or the food on which they thrive and multiply; or, to the growth and multiplication of the contagious particles in the vitiated atmosphere.

Again; we must now speak of an excess of carbonic acid, carburetted hydrogen and moisture, as generated by the air of marshes and by decomposing vegetable matter, as this is the cause, well known to most every person, of malaria, gastric derangements, and our intermittent and remitting fevers. Ventilation of our houses and the drainage of our lands is the complete eradication of it. When the nights become cool in the fall of the year, a little fire in the mornings and evenings will destroy the poisonous germs in our dwellings. We should look as well to dead animal matter. When the air becomes ladened with its ferments and zymotic, blood poisons are the result. Then look well to our graveyards and to our butcheries, as well as to our cesspools and sewages, to protect our drinking water and the air from pollution, even the bedrooms, in many instances, that we occupy are directly or indirectly connected with these fountains of putridity.

Life, then, is a chemical operation; death is the absence of it. Every breath of the blessed out-door air drawn into our lungs is full-freighted with oxygen. This oxygen comes to us, in all its purity and plenteousness, purified by the light of the sun. In every ray of sunlight there are several colors that cleanse it completely and filter it, the same as the earth cleanse and filters our water for our use. How grandly everything is prepared for man. How careful man should be to study the laws of nature carefully and to apply them to his use, and to teach his children to do likewise—and may they be taught as a science in our schools, that our children may learn them from their earliest years, for it is only by the diffusion and practice of knowledge like this that we can ever hope to see a healthy offspring, and to enjoy, not only with impunity, but with advantage, all that is meant by the term "modern conveniences." This will hasten the time when the true physician will be employed to look after the health of his patrons rather than to treat them altogether from a sick or an invalid standpoint.

Another one of our great foes is our social life. The tendency to luxury among the well to-do young women of our cities, towns and country places, does not permit them to realize how this dreadful mania for expensive pleasures and a life of alternate idleness and amusements is destroying their health, abolishing true marriage, feeding the flames of gross sensuality and intemperance among women, as well as young men, saddening the hopes of the best parents of this or any other land. Some of them will never know it in this world. But most of them have no real purpose to waste their lives in this wretched way. It is certainly a high crime in mothers, teachers, ministers, and the public press to pander to this insanity; thousands of excellent young people, both male and female, are sacrificed every year, when a little wise and prudent guidance would save them. The corsetting and tight lacing, and the way the feet of our girls and young ladies of this age are dressed, is filling many a premature grave, and making the lives miserable of many that are eaking out only an existence, and are passing away, like the flowers of June, to give place to a more hardy and resolute class. Men may live long in spite of some pernicious habit; but without it they would have lived longer, and would avoid leaving to posterity an heriditary predisposition to disease. Incorrect reasonings in this regard have often ruined health and shortened life, and left a diseased offspring, and will, in multitudes of instances, do it again. Diet has also much to do with health, and also something to do with the mental condition; it is held to be an axiom that a gross feeder will have a gross mind. I doubt if true refinement of manners can exist in conjunction with an exclusive gross or pork diet; it is certain, at least, that children will grow up more healthful and beautiful in families accustomed to a variety of well-cooked food than in those dieted on an invariably gross diet, as salt pork or smoked herring, fried to the pliability of leather. In one case clear complexions and plump figures will be the rule, and in the other a leathery skin, angular features, lean forms, and irritable and selfish dispositions. We will take farmers, for instance, a large number combine the best known hygieric regimen—good cooking, fresh material and variety with simplicity in mode of serving. Farmers as a rule have an advantage over all others in fresh vegetables, milk, cream, butter, and eggs, and some disadvantages in variety and convenience of meat supplies, which can all be overcome, however, by provision of fowls, lambs, and a little neighborhood arrangement for exchange for other meats. On the other hand, there are many people abundantly able to provide wholesome fare who live abominably, and their children are neither handsome, healthy, nor good-natured. Careful observation and a little reflection will teach them the importance of diet in education. A dyspeptic stomach can never rest, and without periodic repose, both of stomach and brain, mental labor can not long be perform

Late hours and excessive study at school produce mental exhaustion, and affect the stomach directly by sympathy, and an improper diet aggravates the difficulty. I am satisfied that with the mental and material progress for which this country is peculiarly characterized, the physical improvement of Americans will be equally marked, and that we shall become not only the most lithe and active, but the toughest, strongest, and best developed people in the world. We have the best elements of such a race, and the best conditions for their development, and nothing but a lack of wisdom on the part of the people, and their education on this subject, will prevent such a consummation.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

TREATMENT OF TABES BY SUSPENSION. CLINICAL LECTURE BY PROF. CHARCOT.

GENTLEMEN: Since three months we have been experimenting with a new method of treatment of tabes, and the treatment, I must say to you at once, appears to work wonders.

Nevertheless, we are somewhat skeptical, not as to the results obtained, for these are incontestible, but we ask ourselves the question, "How long will this amelioration endure? . . . the future will demonstrate this.

You all know, gentlemen, how helpless we are before this disease, tabes; the apparent riches of our therapeutic arsenal betray our real poverty. When one has so many remedies against a malady, it is because not a single one of them unites in itself all the required advantages. From time to time, however, a spark will light up the darkness. . . . In 1867, when I came to this hospital, M. Vulpian and myself employed the nitrate of silver, as suggested by Wunderlich. The results did not come up to our expectations —without, however, being nil . . . After all, however, the question remained whether nature had not intervened, and whether we had not to deal with those natural tendencies toward recovery so frequently met with in the history of tabes.

Benign tabes is, in fact, not very rare, and to-day when the study of the abortive forms has been pushed very far, we know that a slight inequality of the pupil, some pains of a special type, abolition of certain reflexes or certain visceral troubles, suffice for the diagnosis of tabes to be made. We are far, as you perceive, from the ideas of Duchenne, who saw in ataxy a malady of progressive stages and of close and regular connection.

I saw at Turin, during my last voyage to Italy, an ataxic whom I had attended several years previously who seemed altogether cured, except that he had not recovered his patellar reflexes. A stay at La Malon seems to have had an important part in this happy event.

You know my ideas upon syphilitic ataxy, or what is reputed such. You do not expect me, therefore, to praise the anti-syphilitic treatment. This method of treatment has never been successful; not even when given very early in the case. Attack tabes whenever you will with mercury and iodide of potass, even in considerable doses, the result will always be the same—that is to say, nil.

Nothing is so fatal as tabetic amaurosis, even when produced in syphilitics, and if observations be cited to me of cure, or even of amelioration, I see in them for the most part cases in which the diagnosis is very doubtful.

It is some years since that elongation of the nerves was devised, and Dr. Debove constituted himself the propagator of this plan of treatment. Who thinks any more to-day of elongation?

I shall now speak to you of the method of treatment under experiment, the means for which you see here before you, and which comes to us from Russia, by the intermediation of Dr. Raymond, *agrejé* of the Faculty, who, while charged with a mission to Russia, was enabled to verify the happy effects produced by it in the service of Dr. Motchoukowski, of Odessa.

The manner in which this Russian physician discovered this mode of treatment is very singular. He wanted to put a dressing on a tabetic patient affected with scoliosis. To do this he suspended his patient under the arms (according to the method of Sayres), and put on him a plaster-of-paris jacket. After several days, the tabetic remarked to the doctor that he suffered very much less from the darting pains. The doctor at first believed that this unexpected result was to be attributed to the corset, but very soon after he discovered that the suspension was the true cause of the diminution of the pains.

From then on he applied this treatment to a host of tabetic patients, and all, or almost all, were greatly benefitted.

The apparatus is a very simple one, it consists essentially of a sort of a balance beam, hung by a block and tackle arrangement, by which it can be raised or lowered from a median hook. To the two extremes of the balance beam are suspended straps in the form of nooses, into which the arms are passed. In the center is attached a double sling, supporting the chin in front, and the neck in the back.

By means of the block and tackle the patient is raised a foot or two from the ground, and he is allowed to remain suspended thus for one or two minutes, at the first sitting, two or three minutes at the third or fourth sitting. The treatment is repeated two or three times a week.

In October we began the application of this treatment to tabetics in our service. The idea was given to us by an *élève* of the service, a young and distinguished Russian physician, M. Onanoff, who accompanied M. Raymond to Russia.

The results were astonishing. I shall present to you the patients who came "to be suspended" two or three times a week, and who will tell you themselves the great benefits they have derived from suspension. I must also remark to you that none of these were doubtful cases, but true ataxics, with all, or almost all, the symptoms of tabes.

One of the patients of Motchoukoski had shooting pains, motor incoördination, the sign of Romberg, absence of patellar reflex, sexual impotency, vesical trouble; he underwent 97 suspensions.

The incordination has disappeared; the pains have likewise disappeared.

The sign of Romberg is very much ameliorated.

Finally the sexual functions are re-established—to the great satisfaction of the interested party.

A second patient was in the same condition and was greatly improved; he suffered especially with morbid gastric crisis, which have disappeared. Micturition and the sexual functions were all greatly improved.

A third ataxic was so emphysematous that he could not be suspended. He was placed upon a bed, the shoulders and head fixed and tractions made upon the feet.

Our own patients, were equally as fortunate as the Russians. Fifteen were subjected to suspension and the results have been such that we have thought of applying the treatment to others than tabetics.

We have remarked that suspension had, as a princpal result, the restoration of the sexual function. We thus understand Motchoukowski, who has had the idea of thus treating the neuropathic impotencies.

Gentlemen, permit me a digression: You know that at Paris, and elsewhere, there are establishments where attempts are made, by the most various means, to restore to the impotent, to the aged especially, a more or less factitious vitality, capable of assuming, at least for a time, a satisfaction of desires, . . . more or less natural.

We have asked ourselves the question whether the directors of such establishments did not possess a knowledge of aphrodisiac virtues of suspension. . . . and, for the purpose of satisfying ourselves on this point, we sent emissaries charged with obtaining information and reporting to us. The physician should know everything. He can, like the sun, enter the filthiest apartment, without soiling himself. . . . We have learned that the process of suspension was generally employed.

However this may be, we have already made 900 suspensions, and the results have exceeded our expectations.

Our first patient, aged fifty, said his shooting pains disappeared and his incoördination sensibly ameliorated. He recuperated his sexual powers. Urination became much easier.

He began his treatment the 22d of October, and has been suspended 33 times. The improvement became apparent after the third suspension. It is therefore not to be questioned, though it be true that patients can be easily suggested, we can safely assert that never has any treatment, in so short a time, given similar results.

A second patient with very marked incoördination also began the treatment in October. The pains ceased suddenly, returned once, and since, six weeks nearly, have not reappeared again.

The incoördination was so improved that *the patient descended from the street car without stopping it.* He urinates better, and has erections.

A third patient who came here supported by his wife, comes now alone on foot and without a cane from the Rue de la Tombe Issoire to the Salpetriere. [A great distance.—Translator.]

A fourth patient at first improved, has had a relapse, but it was one of those important cases in whom the nervous heredity (insane, epileptic hysterical), is at its minimum. We do not expect anything else very brilliant in him.

Finally, gentlemen, I am going to show you a little girl of fifteen years, attacked with Friedreich's disease, which has been so falsely called hereditary ataxy. I shall not repeat to you that it is not a question here of ordinary tabes, but rather of a special maledy, the characteristics of which I have frequently described to you. The patient was attended it the city by Dr. Blocq, who conceived the idea of treating her by suspension. This child was greatly improved by this treatment. To-day she can walk much better.

I content myself to-day with calling your attention to the fact. A patient afflicted with primitive myopathy affirms that he feels much better since he began this treatment. It is probable that the suspension, by raising the spinal roots, has brought about changes in the circulation in the spinal cord; changes which produce results up to now greatly to the advadtage of the patients who have been subjected to this method of treatment. Perhaps many other nervous affections are capable of modification by suspension. We shall continue our experience, and I shall not fail to inform you of the results.—*Journal de Med. de Paris.*

◆

The Use of Pepsin in the Local Treatment of Diphtheria and Membranous Croup.

THE field for the use of pepsin seems constantly extending with the improvements made in the quality of this agent, and it may now be employed with great certainty as to results than ever before. The application of pepsin to digest away the membrane in diphtheria and membranous croup is not new, and is more or less commended and resorted to by physicians in the treatment of these diseases.

Naturally, however, its utility depends entirely upon its digestive ability, and on account of the many preparations of pepsin of feeble or no digestive power heretofore at the disposal of physicians, the results obtained have been in some cases discouraging.

As to the value of pepsin, however, in these affections, when of proper purity and strength, there can be no question. We believe that the recent improvements in pepsin, securing greater purity, strength and permanence (we allude to the pepsin purum in lamellis of Parke, Davis & Co.), will lead to its extensive use in diphtheria and membranous croup; maladies now attended with such grave results even when combatted with the most expert medical care.

It is to be hoped, and it is certainly highly probable, that the further study of digestive ferments will lead to the production of a pepsin still more active.

If the false membrane could be easily digested, and there seems no reason why it might not be with a pepsin of high digestive power, we could expect to have fewer cases of interference with respiration and blood poisoning from absorption of septic material, now, alas, so frequent.

Dr. H. D. Chapin, of New York, has made some interesting experiments in the solution of croupous membrane. He says an alkaline solution, not strong enough to act as an escharotic, had no influence on the membrane, or at most produced but slight softening. Experimenting with trypsin he found that croupus membrane was dissolved in from fifteen to twenty minutes by the spray and by solution; the spray acting a little more rapidly than the solution. A solution of trypsin required five hours to disolve the mucus expectoration from phthisis.

Pepsin solutions have been less used and less experimented with than trypsin, and yet this seems likely to give far better results when it does come into more general use.

A solution of pepsin will disolve croupous membrane outside the body in from fifteen to thirty minutes, acting as well as trypsin, with the very important advantage that it does not require an alkaline solution.

The reaction of the fluids of the mouth and throat in diphtheria is markedly acid, and the great majority of local medicinal applications in general use are acid, hence the combination of pepsin with acid fluids can be more easily accomplished than the efforts to keep up an alkaline condition for the use of other solvents.

Speaking of solvents in diphtheria, DaCosta says: "The remedy that has done best is a saturated solution of pepsin in the form of a spray."

But a spray is a terror to most children, especially infants, and many practitioners are deterred from using any remedy, however useful, which has to be applied in that form. In my own practice I always use a swab or sponge, on a bent rod, applying the solution of pepsin freely to the diseased surfaces, every one, two or three hours, according to the severity of the case, and quantity of false membrane present.

The objection to the probang may be made that a child does not submit to its use any more gracefully than to that of the spray; but it takes but a moment to make the application, even if force be necessary to accomplish that object, and the effects are more lasting than the spray, necessitating its use much less frequently.

In regard to the form of pepsin, allow me to say that I have used several, and find that those that come in a scale or crystal form, so-called, are the most active; the powdered form being difficult of solution and not seeming to possess the energy of the former.

Two years ago I began the use of solutions of pepsin locally, with the same general treatment, since when my cases have made a more rapid and better recovery than when the same treatment without the pepsin was administered.—*Exchange.*

Puerperal Insanity of Septic Origin.

AT the meeting of the Medical Society of London, on Dec. 3, Dr. Savage read a paper on this subject, in which he insisted upon the frequent correlation of puerperal fever with puerperal mania. The ordinary form of puerperal insanity, he said, was quite common, and from eight to ten per cent. of all cases met with in hospital practice were due to this cause. When it was considered that a large proportion of the cases were treated at home, the total would seem to be somewhat formidable. Puerperal insanity was less curable, he said, than it was generally believed to be. About five per cent. of the acute cases proved fatal, and no less than twenty per cent. remained permanently afflicted. When of septic origin the malady most frequently took on the acutely maniacal form, and most of the fatal cases were of this kind. He pointed out that neurotic persons, curiously enough, seemed more liable to septic changes, the determining causes being various. He related the case of three sisters, all of whom fell victims to the same form of septic mania at intervals of some months.

Dr. Barnes said that obstetricians saw the beginnings, but missed the sequel. Heredity, he said, was the predisposing cause. As to the evocative causes—blood diseases and such like—he said that Dr. Savage had not drawn a line of demarcation between the mental disturbance occurring during pregnancy, and that which broke out during lactation. It was very important to distinguish between them. Albuminuria was common. The patients had a condition of high vascular tension to which the albuminuria was often due. Then there followed a stage of depression, when the septic symptoms became more marked. In cases that he had seen after labor, anæmia was marked, as was toxæmia from other causes. He said that the liver of a puerperal woman was always fatty, thus increasing the difficulty of disposing of the post-puerperal metabolic products. Emotional shock was a powerful influence in the production of sepsis. Exhaustion was also a factor. He had seen insanity cured by replacement of a displaced uterus.

Mr. Knowsley Thornton said he had had several cases of marked insanity after important abdominal operations. He suggested that the marked acceleration in the pulse, which was considered of such ill-omen in these cases, might be due to septic causes, the other symptoms being masked by the mental condition. He explained the albuminuria, which was often present, to be due to the acute congestion of the kidneys, caused by the elimination of the poison.

Dr. Symes Thompson said there could be no doubt that the susceptibility of puerperal women was largely due to the prostration. Under such circumstances sepsis was more readily induced.

Dr. Savage said that statistics seemed to point to a preponderance of cases among the upper classes. He said there was no more danger to reason from puerperal mania than from the delirium of fever. He preferred a tonic treatment.—*British Medical Journal. Medical Journal and Examiner.*

Strychnine as an Antidote in Narcotic Poisoning.

Dr. G. A. GIBSON calls attention to the treatment of the effects of narcotic poisons by using strychnine to avert the paralyzing action of such drugs on the medullary centers. Narcotic drugs in lethal doses cause death by paralyzing the respiratory center. In the cases of narcotic poisoning that have come under Dr. Gibson's notice during the last three years strychnine has been used hypodermically, when there was any irregularity or interruption of the breathing that appeared to threaten a failure of the respiratory center. The effect of the drug is immediately shown by the increased rate, more regular rhythm, and the greater depth of the respirations, and even in cases in which the breathing had ceased, it began again after the administration of strychnine.

In the treatment of poisoning by narcotics, says Dr. Gibson, two things should be studiously avoided: 1. Making the patient walk, and flogging him, to keep him awake. Such treatment has a tendency to exhaust the vital powers. 2. The use of alcoholic stimulants, which aid the action of narcotics.

The patient should be kept in the horizontal position, the respiration is to be carefully watched, and should there be the least sign of irregularity, or shallowness, or inequality in the breathing, gr. $\frac{1}{160}$ or $\frac{1}{60}$, according to the age of the patient, of sulphate of strychnine should be given subcutaneously, and may be repeated at intervals of an hour, two or three times. If, notwithstanding this, respiration becomes very feeble, or ceases entirely, artificial respiration must be begun promptly. If the circulation threatens to fail in consequence of the poison affecting the motor mechanism, or of spasm of the arterioles caused by deficient oxygenation of the blood, it should receive prompt attention. Strychnine may be used as a stimulant to the motor centers of the heart, and may be aided by the use of ammonia or ether. If artificial respiration has been thoroughly performed, there should be no spasm of the arterioles; but should there be any, nitrate of amyl must be used. Strychnine may be used also in cases of threatened failure of the respiratory center, caused by the general anæsthetics.—*The Practitioner.*

Gleanings.

Temperature in Jaundice.—In case of jaundice, the bodily temperature is abnormally low, except in those inctances where jaundice is occasioned or accompanied by a disease which of necessity begets fever. When the liver is performing its functions naturally, much heat must necessarily be generated by the rapid chemical changes involved in its work; but when these changes are lessened or held in abeyance, as occurs in jaundice, the temperature would fall, and no doubt affect the whole system in like manner.—*Medical World.*

Recurrence of Malignant Growths after Removal.—At the recent meeting of the French Surgical Congress, perhaps the most important question discussed was the recurrence of malignant growths after extirpation. M. Cazin, of Berck-sur-Mer, introduced the subject by giving a summary of the results of operations which he had performed from 1862 to 1886. During these twenty-four years he had removed no less than 564 tumors; including myxomata, chondromata, and sarcomata, besides true cancerous growths. In 102 cases of scirrhus of the breast, there was secondary glandular affection in 60; of these 7 were permanently cured, in 48 recurrence took place, 3 died, and in 2 the result was unknown.

Among the remaining 42 cases, in which the glands were unaffected, there were 8 cures, 28 recurrences, 2 deaths, and 5 were lost sight of. In 120 cases of encephaloid, the glands were involved in 80; of these 5 were cured, the disease returned in 67, 4 died, and 4 could not be traced. Thus, in a total of 222 cases, there were 28, or 12.6 per cent., permanent cures.

Taking the scirrhus cases separately, we find that the total number of cures was 15, or 14.7 per cent; but of those in which the glands were affected, only 7 out of 60, or 11.66 per cent. were cured, while of the others, in which the disease was limited to the breast, permanent cure was obtained in 8 out of 42, or a fraction over 19 per cent.

Among the 120 cases of encephaloid 13, or 10.8 per cent. were cured; but of the 80 in which the glands were involved, the proportion of cures was only 5, or 6.25 per cent., whilst of the 40 in which there was no glandular enlargement, no fewer than 8, or 20 per cent. were cured.

In the cases in which recurrence took place, the disease returned in from three months to seven years after operation. This statement, it is to be presumed, applies to the whole mass of cases taken together, and not to the cancer group alone. M. Cazin is right, we think, in looking upon these results as fairly satisfactory in the present state of surgical science, and he attributes his success to the freedom with which he removes apparently healthy tissues surrounding the growth, and to the care with which he seeks for and removes not only diseased glands, but the lymphatics between them and the tumor. He is not content with exploring the axilla, but makes minute search in the subclavicular region, behind the clavicle, and in the supraclavicular fossa.—*British Medical Journal.*

FOR VOMITING OF PREGNANCY.—(Blumensaudt.)

℞.—Cocaine hydrochlorat, . . .	gr. iv.
Tinct. anisi,	
Spts. menth, ...	āā ʒijss.
Syr. cinnamoni, ...	℥j
Aquæ tiliæ, ...	℥ivss.—M.

Sig.—Dessertspoonful every hour or so.—*La Gazette Médicale.*

BONES OF THE INSANE.—In many cases of insanity, the osseous structures undergo certain pathological changes which render them peculiarly liable to fracture on the application of very moderate force—a degree of force in no way commensurate with the effects produced. This condition especially effects the ribs; the attendants on lunatics are open to charges of unnecessary violence, when the patients may have received their injuries through the unnatural brittleness of their own bones—a condition known as *osteomalacia.*—*Medical World.*

INCOMPATIBLE ANTISEPTICS.—The *Journal de Médecine de Paris* points out the incompatibility of the following commonly prescribed substances:

Corrosive sublimate and iodine.
Corrosive sublimate and soap.
Phenic acid and iodine.
Phenic acid and permanganate of potassium.
Iodine and soap.
Salicylic acid and soap.
Salicylic acid and permanganate of potassium.
Oil, soap, or glycerine, and permanganate of potassium.

A New and Only Way of Raising the Epiglottis.—After a somewhat elaborate argument, the following conclusions are drawn :

1. Contrary to universal belief, traction of the tongue can not raise the epiglottis.

2. By sufficient extension of the head and neck, whether by volition, instinct, reflex action, or by the effort of another, whether in the healthy, the dying, or the dead, the epiglottis is instantly, and beyond prevention, made completely erect.

3. By complete extension of the head and neck the tongue and velum are, as respiratory obstructions, simultaneously with the epiglottis, removed, and without a moment's delay the entire air-way can be straightened, enlarged, and made free throughout by the nearest person.

If syncope happent to be a chief or secondary factor, this also gets the quickest and best direction.

The way to make complete extension of the head and neck.—Having, by bringing the patient to the edge of the table or bed, or by elevation of the chest, provided that the head may swing quite free, with one hand under the chin and the other on the vertex, steadily but firmly carry the head downward and backward ; the neck will share the motion, which must be continued until the utmost possible extension of both head and neck are obtained. Sometimes a slight extension or elevation of the chin, merely, will at once check stertor, or irregularity of breathing; but the extension, which can in no case do harm, should be always rather more than less than appears necessary. It should never be forgotten, however, that the full extension, as above described, can be secured with certainty only by making the extension complete as directed.

That the customary pulling forward of the tongue is followed by relief the author admits to be true in some cases, but in some cases only; the inversion of the entire body, the chucking under the chin, the jerking the angle of the jaw, in each of these the good done, and which was the only and all-sufficient reason for the habit, is an interesting corroberation. Each tended to rise the opiglottis, but the operators did not know it.

Further corroberation is in the familiar position instinctively assumed by the croupous, the diphtheric, asthmatic, the dying.—*N. Y. Medical Record.*

COCAINE IN QUINSY.—The *British Medical Journal* of May 19, 1888, contains an artical by Dr. de Havilland Hall on the treatment of acute tonsillitis by cocain. He reports several cases in which the disease had been cut short by the free application to the fauces of a twenty per cent. solution of cocaine, and believes that the drug acts by diminishing the sensibility so that deglutition can take place without pain, and also by diminishing the local congestion so that the inflammatory process is arrested. It would appear that cocaine is more active after the throat has been cleansed by a solution of bicarbonate of soda.—*Sacramento Medical Times.*

Book Notices

INTERNATIONAL POCKET MEDICAL FORMULARY. With an Appendix, Containing Posological Table: Formulæ for Inhalations, Suppositories, Nasal Douches, Eye-Washes and Gargles; Hypodermic Formulæ: Table of Hypodermic Medication; Use of Thermometer in Disease; Poisons and their Antidotes; Post-Mortem and Medico-Legal Examinations; Artificial Respiration; Ligation of Arteries; Obstetrical Table; Urinalysis; Differential Diagnosis of Eruptive, Typhoid, Typhus Fevers; Table of Pulse, Temperaturé, Respiration; Motor Points, etc. By C. Sumner Witherstine, M.S., M.D., Associate Editor of the *Universal Medical Sciences*, etc. 12 Mo. Pp. 300. Flexible Leather with Flap. Philadelphia and London: F. A. Davis. Price, $2.00.

The title page above sets forth the contents of the work well, and gives a very good idea of the object of the work. We have always maintained that a physician should be able to make his own prescriptions, and we are still of that opinion, for with persons having the same disease, though they may be presenting the same symptoms, yet difference in age, constitution, individual idiosyncrasies, and other modifying circumstances would not permit that the same prescription be written for each. But it is not often that we find two persons affected with the same disease exhibiting the same indications for treatment. To one man who has pneumonia it might be necessary to give spts. vini galliceæ, ammon. carb. etc.; to another, antim. et potass. tart, etc.

In this work the principal affections are arranged in alphabetical order; and, under each, are various formulæ, or prescriptions, which are applicable in its treatment, as under the head of "Incontinence of Urine," are found the following prescriptions, among several others:

℞.	Strychniæ Sulph.,	gr. j.
	Pulv. Cantharidis.,	gr. ij.
	Morph. Sulph.,	gr. iss.
	Ferri Redacti.,	gr. xx—M
	Ft. Pill. No. xl.	

Sig. One pill thrice daily to a child ten years old. By Dr. Gross.

℞.	Tinct. Ferri Chlor.,	ʒij.
	Ext. Ergotæ Fld.,	ʒv.
	Spts. Chloroform.,	ʒij.
	Tinct. Quassiæ.,	℥iv—M.

Sig. Teaspoonful in a wineglassful of water thrice daily for children. By Dr. Potter.

The work is bound like many of the visiting lists with a pocket for prescription paper, a place for a pencil and can be carried in the side pocket of one's coat,

Many will find it very useful containing, as it does, the names, doses, and best methods of administering not only old, but all the new remedies that have been found to possess merit.

THE PSYCHIC LIFE OF MICRO-ORGANISMS. A STUDY IN EYPERIMENTAL PSYCHOLOGY. By Alfred Binet. Translated from the French by Thomas McCormack, with a preface by the author written especially for the American edition. Chicago: 1889. The Open Court Publishing Company. Cloth, 75 Cents. Paper, 50 Cents.

M. Alfred Binet, the collaborator of Ribot and Féré, and one of the most eminent representatives of the French School of Psychology, has presented in the above work the most important results of recent investigations into the world of Micro-Organisms. The subject is a branch of comparative psychology little known; as the data of this department of natural science lie scattered for the most part in isolated reports and publications, and no attempt has hitherto been made to collate and present them in a systematized form.

Especial use has been made of the investigations of *Balbiani*, *Claparède* and *Lachmann*, *Maupas*, *Ribot*, *Engel-*

mann, Pouchet, Weber, Pfeffer, Kent, Dujardin, Gruber, Nussbaum, Bütschli, Lieberkühn. The cuts, eighteen in number, are illustrative of the movements, nutrition, digestion, nuclear phenomena, and fecundation of Proto-Organisms.

The most interesting chapters are those on fecundation, which demonstrate the same instincts and vital powers to exist in spermatozoids as are found in animals of higher organization.

M. Binet's researches and conclusions show, "that psychological phenomena begin among the very lowest classes of beings; they are met with in every form of life, from the simplest cell to the most complicated organism." The author contests the theory of the distinguished English scientist, *Prof. George F. Romanes*, who assigns the first appearance of the various psychical and mental faculties to different stages or periods in the scale of zoölogical development. To M. Binet there is an aggregate of properties which exclusively pertain to living matter, the existence of which is seen in the lowest forms of life as well as in the highest.

QUESTIONS AND ANSWERS ON THE ESSENTIALS OF MEDICAL CHEMISTRY. Prepared Especially for Students of Medicine. By Lawrence Wolff, M.D., Demonstrator of Chemistry, Jefferson Medical College, etc. 12mo. Pp. 214. Cloth. Philadelphia: W. B. Saunders. Price, $1.00.

Last month we noticed the "Essentials of Surgery," belonging to this series.

Mr. W. B. Saunders is undoubtedly doing a good work by publishing a series of Question Compends for the use of medical students. It is not the design of them to supplant any of the text-books, but to contain the essence of those facts with which the student must be familiar.

This little work can be easily carried in the pocket and consulted at any time—even in the street, if one, in walking along, should have his mind occupied upon chemical subjects, and should feel that he needed some prompting.

We assent to the statement made in the advertisement of the series, that the Quiz Compends will become popular. They afford students a better idea of what will be expected of them in Examination Rooms and at their final examination.

ELECTRICITY IN THE DISEASES OF WOMEN, WITH SPECIAL REFERENCE TO THE APPLICATION OF STRONG CURRENTS. By C. Betton Massey, M.D., Physician to the Nervous Department of Howard Hospital; Late Electro-Therapeutist to the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases; Member of the American Neurological Society, etc. 8 vo. Pp. 210. Cloth. 1889. Philadelphia: 1231 Filbert Street, F. A. Davis. Price, $1.50

Electricity as a therapeutic agent is coming more and more into favor with the profession. It has long been used by a class of irregulars—quacks—who have employed it as a cure for all diseases; but it has not been regarded as an efficient remedy by regular physicians generally until within recent years. Even now there are some physicians who do not consider it as holding an undoubted position among the recognized remedies of regular physicians. Not a few consider it more of a *placebo* than a curative means—that it answers a very good purpose in keeping a patient's attention engaged, and maintaining him in a good humor by the belief that he is being actively treated while remedies are being administered whose actions are necessarily slow and effects consequently from day to day imperceptible.

The work contains nineteen chapters, the aim being in these chapters to present briefly the laws of electricity as applied to gynecological medicine and surgery in a concrete and practical shape, and to make the medical user of electricity as intelligently familiar with this physical force as is now required of so many practical workers in its industrial applications.

The titles of a few of the chapters are: "Action of Concentrated Milliampere Currents on Organized Tissue;" "The Faradic Current in Gynecology;" "General Percutaneous Applications in the Treatment of Nervous Women;" "Electrical Treatment of Subinvolution, Uterine Hyperplasics, and Pelvic Indurations;" The Electrical Treatment of Uterine Displacements;" "The Contra-Indications and Limitations," etc.

We are really of the opinion that the work will "fill a a want," for we believe that it is the first attempt at a complete treatise on the electric treatment of the diseases of women.

THE YEAR-BOOK OF TREATMENT FOR 1889. Being a Critical Review of the Practice of Medicine and Surgery During 1888. Contributors, J. Mitchell Bruce, M.D., Malcolm Morris, F. R. C. S. E., Alfred Cooper, F. R. C. S., Edmund Owen, F. R. C. S., Sidney Coupland, M. D., Sidney Phillips, M.D., Sir Dyle Duckworth, M.D., Henry Power, M.B., F. R. C. S., Geo. P. Field, M. R. C. S., and thirteen other physicians and surgeons of Great Britain. 8vo. Pp. 344. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Cloth. Price, $1.25.

As our readers are aware, a volume of the Year-Book is published each year, for the purpose of presenting to the practitioner, not only a complete account of all the more important advances made in the treatment of diseases during the year past, but also to furnish a review of the same by competent authorities. The volume on our table is, as is shown in the title, for 1889, exhibiting the advances in treatment during 1888, as set forth in medical journals.

At the risk of being suspected of indulging in fulsome praise, we will state that we believe that nine out of ten of all intelligent physicians, who had the opportunity of examining this work half an hour, would purchase a copy of it. It is brimful of the most interesting practical instruction, of a kind that practitioners would have occasion to make use of every day.

Take for instance this on page 119, under the head of DIPHTHERIA, from the *Brit. Med. Jour.*, Sept. 22, 1888, by Jacobi. "There are no specifics, no panaceas. Chlorate of potassium is a good adjuvant. Give it often and in small doses, if at all; and remember that it may be a poison. There are three great indications to be fulfilled in every case:—Cleansing and disinfection of the surface from which systemic poisoning may take place; fitting the patient to fight out the disease; and meeting local emergencies. Locally, whatever is done must be done very diligently and indefatigably, but without violence to the sore surface and the patient. No child can stand the alliance of diphtheria and doctor, or diphtheria and nurse." Among the medicines, Dr. Jacobi has learned to respect the chloride of iron; the tincture may be given to the extent of a drachm daily to a year old baby; much more to older children, in very frequent and small doses. In heart failure digitalis, strophanthus, sparteine, caffein, camphor, alcohol and musk, are all useful, and must not be postponed until feebleness and collapse have set in; and of the same importance are alcoholic stimulants. The author speaks highly of caffein as an excellent cardiac tonic; and the best internal stimulant in very urgent cases is Liberian musk. He gives it from a bottle shaken up with thin mucilage. He gives it at short intervals. When ten or fifteen grains will not restore the heart's action, in a child of one or two years, in three or four hours, the prognosis is very unfavorable. Perhaps the most useful remedy is mercury—he prefers the bi-chloride; his experience has been very large, but mainly confined to laryngeal or bronchial cases. The uniform internal administration has been an hourly dose of it. The smallest daily quantity ever given by him has been ¼ grain to a baby of four months, which was continued a few days, and then somewhat lessened. Half a grain may be given to children from three to five years for four or eight days, or longer. The doses vary from $\frac{1}{60}$ to $\frac{1}{30}$, and require dilution to 1 in 6,000 or 10,000 of water or milk. There is no stomatitis; gastric or intestinal irritation is very rare. It occurred occasionally when the dilution had not been sufficient, and if ever it exists, small doses of opium will remedy it."

It is stated that Noel thinks highly of borax in diphtheria given internally. For children under one year the daily dose is 7 to 15 grains; 15 to 22 grains to those under five years; 30 grains under ten; and up to 75 grains for an adult. The medicine is divided into equal doses for every hour, except when the child is asleep. The drug produces abundant salivation in a short time. No local treatment of any kind was adopted.

Each department of practice has been fully and concisely treated. The medical literature of all countries has been placed under contribution, and the work deals with all the more important matters relating to treatments that have been published during the year ending September 30, 1888.

The physician who obtains the volume of the Year-Book for this year, will, beyond doubt, secure the volumes of subsequent years.

EXPLORATION OF THE CHEST IN HEALTH AND DISEASE. By Stephen Smith Burt, M.D., Professor of Clinical Medicine and Physical Diagnosis in the New York Post-Graduate Medical School and Hospital; Physician to the Out-Door Poor Department (Diseases of the

Heart and Lungs), Bellevue Hospital. 12mo. Pp. 206. Cloth. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co., 1889. Price, $1.50.

This is a new work; not a new edition of one that has been before the profession for a long time. We say this for the reason that, it is generally understood, a new candidate for the honors of authorship is presumed to put forth his best efforts to make his work in demand, in consequence of its representing better than any that have preceded it the latest advances that have been made upon the subject of which it treats. The author explains the reasons that moved him to appear before the profession as an author as follows: "Teaching naturally leads to requests from the class for a work that shall embody the methods pursued by the instructor." This present manual is the outcome of such requests.

Students of medicine engaged in studying auscultation and percussion—physical diagnosis—and also physicians who wish to review the study of making examinations of the chest, with reference to health and disease, will find this little work well adapted for their purposes. It is practical; it gives instructions upon just such points that are most necessary upon which to be instructed; its teachings are concise, but sufficiently full for completely understanding the various subjects of the department to which it is devoted.

The author states that in the construction of the work he has utilized the results of his own personal experience, as well as the common stock of medical teaching. He has made no attempt to establish pathognomanic or distinctive signs of disease, because it seems that precision in diagnosis is more surely obtained by treating each sign as subordinate to the various combinations of signs which are found in the different maladies.

It has been the object of the author to aid the student in his efforts to learn the significance of physical signs and their mode of development. As set forth in this little work the careful study of them will make the student skillful in detecting disease and resolving the character of it.

A SYNOPSIS OF THE PHYSIOLOGICAL ACTION OF MEDICINES. Prepared for the Use of the Medical Department of the University of Pennsylvania. With the Approval of the Professor of Materia Medica. By Louis Starr, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, and James B. Walker, M.D., Professor of Practice of Medicine in the Woman's Medical College, Philadelphia. Assisted by W. M. Powell, M.D., Physician to the Clinic for Diseases of Children in the Hospital of the University of Pennsylvania. Third edition; Enlarged. 18mo. Pp. 72. Cloth. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price, 75 Cents.

This little work has now reached a second edition. The mode of arrangement adopted was determined upon as being more convenient for reference than the chart form. Students will find it very convenient and of great service in studying the physiological action of drugs.

Editorial.

EYESIGHT.—A recent number of the *British Medical Journal* contains an interesting article entitled, "EYESIGHT AND THE EDUCATION ACT." The writer expresses surprise that, at the present day, there should be even medical men found who believe in the possibility of diminishing short-sight by use of the eyes. A certain party, it is stated, demonstrates the danger of a little knowledge, by stating that, in Russia, increasing the reading distance has been found to have this effect; but while it is perfectly true that this method of treatment is one universally recognized, its object is merely to prevent the increase of existing myopia. It should be impressed upon the lay mind, the writer insists, especially those who are engaged in teaching, that true short-sightedness depends upon an abnormal increase in the antero-posterior diameter of the eye, and that this can no more be diminished than can the length of a limb; that a given amount of myopia having been attained, it may, and generally does, increase, but it can not diminish; that facts which are generally opposed to this statement depend solely on other conditions (for example, spasm of accommodation) having been mistaken for short-sight, We would not set up our knowledge in opposition to that of the writer of the article in the *British Medical Journal*, for he is probably an expert as regards affections of the eye; but it occurs to us that in considering that the antero-posterior diameter of the eye can be no more diminished than can the length of a limb, he is disposed himself, as he charges that opticians are, to "look upon the eye solely as an optical instrument—an organ to see through rather than with." Very modestly we suggest that the eye has muscles externally and nerves, the latter of which by calling the former into action repeatedly, and for a long time, could eventually bring about such a compression of the eye antero-posteriorally as, in course of time, to bring about permanent diminution in the antero posterior diameter of it. A couple of years ago a frequent contributor to the pages of the MEDICAL NEWS, Dr. Hopkins, we believe, of Richmond, Ind., suggested in one of his articles that, not infrequently, the use of spectacles by many persons who had recourse to them in consequence of advancing years diminishing the antero-posterior diameters of their eyes, might be able to dispense with them either altogether or greatly prolong the time before it would be necessary to use them, by not having recourse to them so soon as they observed that the focus of vision was lengthened by reason of their increased years; that if they would continue their efforts to read, to sew, or do other work with their eyes, in which they first noticed a longer focus was necessary, without donning spectacles, the muscles of the eyes would be brought into action by reason of the extraordinary demand made upon them, and it would be found, sooner or later, that the corneæ of the eyes had regained their former rotundity, and the usual antero-posterior diameters of the organs of vision restored. We are not prepared to assert the correctness of the hypothesis, but we do believe that we have witnessed instances in which the use of spectacles had been greatly delayed by not at once seeking their aid altogether so soon as age dimmed the sight. The majority of persons begin the use of glasses by or before fifty years of age, but we have a number in mind who did not commence their employment until they were fifty-five years old. Now if these parties had sedulously entirely declined, from the first, all artificial aid to vision, whether or not the flatness of the corneæ, resulting from time, would have been corrected, and so continued, we are not in a position to state.

But there is a strong temptation, when dimness of sight is first experienced, now and then, to seek the assistance of spectacles when haste is conjoined with an urgent need for all the sharpness of eyesight possible, and when temptation is once yielded to its indulgence becomes easier subsequently, and glasses will remain upon the nose when the cause which caused them to be mounted upon it no longer exists.

Having made so long a digression we will return to the statements of the writer in the *British Medical Journal.* He says that the belief that the wearing of glasses "weakens" the sight is a fallacy, and that it has been largely dispelled by the spread of education. The greater the improvement in vision, it is stated, produced by the spectacles, the more dependent the wearer becomes upon them; hence the frequent statement, which is perfectly true, that vision without glasses has become worse since they were used.

As regards children attending school, the writer says: "Every child is compelled by law to attend school, and, by its teacher, to do his utmost for the credit of the school. No efficient preliminary examination is made of the child's mental or physical capabilities. He is placed in a certain standard, and every child in that standard must go through the same curriculum. A certain proportion are short-sighted, or, at any rate, have defective distant vision. A teacher who is fairly intelligent soon discovers these, and they are sent to the nearest hospital for advice. In some of these, glasses alone are required, and there is little practical difficulty in procuring them. Others, however, require in addition a modification of the conditions of school-life. A very much larger proportion of children, however, suffer from hypermetropia. There may be no defect of distant vision, but looking at near objects produces headache, dimness, lachrymation, etc., either at once or after a time. The recognition of this defect is obviously less easy for the teacher, but the treatment is more simple, for in nearly all cases optical appliances place the child on a par with others, and there is no necessity to modify the curriculum. It is inevitable that, under the existing system, a large number of hypermetropes should struggle through their school-life at the expense of much mental and physical suffering which might have been entirely avoided.

"Now, as to the remedy. The first step that is necessary is, we hold, to abolish totally and forever the grant-earning system. So long as this obtains, it is inevitable that every child should be looked upon as a grant-earning machine, and be worked to the utmost of his capabilities, regardless of the remoter consequences. In the second place, a knowledge of the 'hygiene of the eyes' should be a *sine quâ non* for a school teacher. The arrangements for the lighting of the schoolroom may be perfect, the desks of the newest style, and print excellent, but all these real advantages will be, to a great extent, neutralized by a teacher who does not understand the principles on which they are devised.

"We doubt whether a medical examination of the children's eyes on entering the school would elicit as much useful information as a more deliberate observation by an intelligent teacher. Fully 90 per cent. of young children are hypermetropic, and it would not be possible to lay down a hard-and-fast rule as to what degree of hypermetropia should be taken to indicate the necessity for glasses. The general condition of the child, and the work it has to do, are important factors which could be better measured in the school-room than in the consulting room.

"We believe that any fear of the nation becoming 'purblind' is entirely groundless, but that an enormous amount of temporary suffering and permanent injury is needlessly inflicted we have no doubt; and this is a state of affairs that calls loudly for some inquiry and remedy. On the whole, we believe that a committee should be formed consisting of school board members, teachers, and ophthalmic surgeons to investigate the whole subject."

THE *Western Druggist* noticed editorially last month the suit against Dr. Castleton, of Texas, for damages sustained by the death of a child. The prescription in question is stated to be:

℞	Antipyrin	grains xv.
	Spirits nitrous ether	fl. ʒ ii.
	Tinct. aconite	drops viii.
	Syr. lettuce, q. s. to make	fl oz. ii.

To be administered in teaspoonful doses.

If a sufficient quantity of nitrous acid had been present to convert the methozin entirely into the isonitroso compound only about 17½ grains could have been formed (177:206 : : 15 : 17.4+) or a trifle over one grain in each dose. If such was the case, and the salt in question really caused the death of the child, a boy of five years, as only one dose was taken, it must possess intensely poisonous properties. Moreover, it is not likely that the acid was present in sufficient amount to have produced seventeen and one-half grains of the nitryl, and which would, theoretically, require 3.3% ÷ of nitrous acid in the two fluid drachms of spirits used.

Whatever may have been the cause of the deplorable results which followed the use of the mixture, the writer is impelled to offer the suggestion that from the fact that the formation of isonitril can be so easily prevented, there is no excuse save ignorance for its appearance in a prescription.—*Medical Herald.*

TREATMENT OF TABES AND IMPOTENCY BY SUSPENSION.—We hope our readers will not neglect reading the lecture of CHARCOT in this number of the MEDICAL NEWS, translated for us by Dr. Illowy, of Cincinnati, from the *Journal de Med. de Paris.* The MEDICAL NEWS, we believe, has the honor of being the first medical journal in this country to publish this very interesting lecture.

Dr. Charcot informs us in his lecture that suspension by the arms and head, so far as he has employed it at the present time, affords almost certain relief to a number of the symptoms of ataxia—shooting pains, motor incoördination, sexual impotency and vesical trouble. But what seems to us still more remarkable, it produces restoration of virile power in those who have had it dimished by age. In fact, according to Charcot, it has, "as a principal result, the restoration of the sexual function."

But we will let our readers read the article for themselves. On account of the translation of Charcot's lecture, and also the article of Dr. Hopkins on SANITATION, having been handed to us after the present issue of the MEDICAL NEWS had made considerable progress in being set up, we have been compelled to give them positions out of the regular order of arrangement. Dr. Hopkins' article will be found to possess much valuable information.

MIND IS NOT MATTER, says Dr. O. Everts, of the Cincinnati Sanitarium, as it is only a manifestation of material activities, subject to endless variations, affected by the relations of living mechanisms to environments, however dimly the fact may be perceived.

AMERICAN MEDICAL ASSOCIATION.—The *fortieth annual meeting* of this organization will be held the last week in June, of this year, in Newport, R. I. This will be the first year that a meeting will be held outside of a large city. Though it will assemble at Newport without the invitation of the local profession, yet there is every reason to believe that the meeting will be a success, for we understand that the resident physicians are putting forth their best efforts to that end. The whole of them constitute a local committee of preparation, of which Dr. Storer is Chairman. It is possible that the City Council or a citizens' committee will assist in the entertainment of the visitors, Mayor Coggeshall having suggested such action to the City Council, in connection with the observance of the two hundred and fiftieth anniversary of the settlement of the city.

The last meeting was held in Cincinnati, at which not less than 1500 physicians, from all parts of the United States, were present; many of them brought their families. There were, besides, not less than 100 exhibitors of instruments, medical preparations, invalid appliances, books, etc.

The editor of the *Journal* says that all contemplating contributing papers to the Sections should communicate with the officers of the Section in which their papers will be read, as soon as possible. In preparing papers for the Sections, the rules of the Association, in regard to papers, should be borne in mind. Among the rules is this requirement: that any one proposing to present a paper, or a report, to any one of the Sections, should forward either the paper or a *title* indicative of its contents and its *length* to the Chairman of the Committee of Arrangements, at least one month before the annual meeting at which the paper or report is to be read.

It is not permitted to the Sections to refer papers or reports to the Committee of Publication, except such as can be fairly classed under one of the three following heads: 1. Such as may contain and establish *positively* new facts, modes of practice, or principles of real value. 2. Such as may contain the results of well-devised, original experimental researches. 3. Such as present so complete a review of the facts on any particular subject as to enable the writer to deduce therefrom legitimate conclusions of importance.

All papers must be so prepared that they can be at once put into the hands of the Permanent Secretary, to be transmitted to the Committee of Publication.

THE
CINCINNATI MEDICAL NEWS.

VOL. XXII. NO. 255. Old Series. | MARCH, 1889. | VOL. XVIII. NO. 3. New Series.

Original Contributions.

Peculiar Case of Triplets.

BY E. A. COBLEIGH, M.D., CHATTANOOGA, TENN.

As triplets, in midwifery practice, only occur, according to published statistics, about once in 7,900 cases, and having recently had a second case in a professional career of about seventeen years, I have deemed this latter one worthy of report, because of its peculiar and rare complications, and measures required for surmounting them.

Mrs. A., white, thirty years old, of good family, mother of four children, was pregnant for the fifth time. She had a history of post-partum hemorrhage in one confinement, and severe and tedious puerperal fever in another. Ordinarily healthy, she suffered more than usual during the last pregnancy from trivial but annoying ailments, following each other in tolerably rapid succession, as neuralgias, headaches, backaches, disturbances of bladder, diarrhœa, undue weakness, edema of lower limbs, enlarged veins, etc. My partner and myself were often called upon to prescribe for her during several months, and her husband was more than ordinarily anxious lest she was going to experience serious trouble in labor.

Menstruation last appeared in June, 1888, about the 16th. She was expecting confinement the last of March, or first of April, 1889, and as she got nearer the time her troubles increased in intensity. February 13, 1889, I was called to visit Mrs. A. about two P.M., by the husband, who said she was having some pain; not sure that labor was imminent, though he preferred she should be seen. Found her tranquil, in good spirits and os uteri dilating normally, with a vertex presentation and unruptured membranes. After waiting patiently rather longer than my habit, because of her former lying-in troubles, I ruptured the sack, but there was only a scant flow of amniotic fluid, and pains seemed deficient. Abdomen above usual size, pelvis roomy, occiput *seemed* to fill passage fully, and I surmised a rather large baby. There was no progress, and yet no appreciable cause for delay, at end of half an hour, and pains had become reasonably strong under proper medication and kneading of abdomen. I now put patient on right side instead of the dorsal decubitus, and immediately following the changed posture a single pain wholly expelled a living child of about six pounds' weight. At once examined for another, and found a breech presentation in an unruptured sack, uterus quiet, everything in good shape, and prospects of twins. Delivered first baby to nurse, told the mother and those present we were to have two, and got ready for renewal of pains. Just here had to leave mother in order to resuscitate infant, which had become asphyxiated. This took me twenty minutes, the mother meantime resting easily with light pains. The infant again in good shape I returned to the woman, whose uterus was contracting fairly well, but no advancement of contained fœtus. Finally ruptured sack. Profuse gush of fluid and child came down instantly, but stopped with arms hung at pelvic brim. These were brought down one at a time, and still my baby would not advance, though pains were quite expulsive. Suspecting extension of the head or misfit of diameters, I reached for the chin, which was posteriorly placed, but found myself "at sea." No trouble to reach head, but geography thereof very puzzling, though my obstetrical experience covers about one thousand cases. After great trouble I succeeded in ascertaining that another infant was trying to present by the vertex, and that its head was in advance of my footling's, face front, and the two chins firmly locked together. No effort of mine was in the least effective toward pushing the interlocked heads up and dislodging the chin "tie." I saw trouble brewing, and sent for Dr. Rathmell, my partner, our office being only four squares away. Dr. R. responded at once with a fresh supply of anesthetics, and we chloroformed the patient forthwith to complete extent, as she had previously only had enough to render labor bearable, as is my habit. I now proceeded to decapitate the footling, already dead, as shown by pulseless state of prolapsed cord, which had been giving me trouble previously. This was done in very short order by means of a large chain ecraseur, the head pushed back out of way of third baby, and I delivered this one immediately with forceps, after rupturing its own separate and intact amniotic sac, with a second profuse flow of water. The decapitated head was next delivered, manually, to guard maternal parts from injury by spiculæ of crushed and protruding cervical bone. A single placenta with only one cord extruded spontaneously. A second, and *double* placenta, was adherent, and delivered artificially because of beginning of profuse hemorrhage. Uterine cavity was thoroughly emptied, and external manual compression controlled the bleeding. The last baby was small not over five and one-half pounds, blanched and shriveled, being still-born.

We found that the umbilicus of the first baby corresponded with the cord of the single placenta. The decapitated infant was a little larger than the first one, well formed, and had a large cord belonging to the second placenta. The dead baby's cord was shriveled and unhealthy looking, and also belonged to the second placenta. All the infants were boys.

The mother rallied nicely, did well, and is up and about now, three weeks after the confinement, and the living baby, though "puny" for some days, finally grew thrifty, and bids as fair to reach adult life as any infant. There had never been a plural birth in the family before among the relatives of either parent.

With a not limited experience with twins, and divers complications in labor, and triplets once before in my earlier practice (all three of which lived), this case was unique to me. We had here all of the following conditions:

Premature labor and troublesome pregnancy (not uncommon in multiple cases); all the babies of same sex; three separate amniotic sacs; two placentæ, one single and one double; an asphyxiated babe after delivery needing resuscitation; a footling hung by arms on pelvic brim; a prolapsed cord; locked chins; decapitation; forceps; manual delivery of head; adherent placenta; some post-partum hemorrhage. Result, one child thriving, and excellent recovery of the mother.

In conclusion, I will remark that I never saw in my own practice a multiple pregnancy in a primipara. Had this woman been primiparous, the trouble would doubtless have been much greater. In my former case of triplets the mother had had first a single birth, then three successive pairs of twins, and finally a set of triplets, all of which lived. Finally, in my medical acquaintance, which is extensive and includes several States, I have never personally known a physician who had delivered, or been present at the delivery of triplets; and have only met one who—just missing a case by the attendance of a midwife—treated the mother of triplets through her lying-in. A medical friend in good city practice informed me a few days since, during conversation on this very point, that since entering the profession seven years ago he had not even encountered a case of twins. And it is alone because of its rarity and the extensive chain of complications that I thus minutely describe this experience at the bedside with triplets.

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The Baltimore Academy of Medicine.

The 164th meeting of the Academy was called to order by the President, Dr. Henry M. Wilson.

Dr. T. A. Ashby made some remarks upon the use of electricity to facilitate dilatation of the stenosed cervix uteri by the passage of sounds. He exhibited a simple apparatus which he had contrived for this purpose—a common sound insulated by a rubber tube, and fitted for the attachment of battery wires. He had tried this method in only one case, but had met with such success that he thought it worthy of further trial, the stenosis yielding much more rapidly than when no current was used. Twenty-five milliamperes was the greatest strength of current applied. He used the positive pole for the uterus and the negative on the abdomen.

Dr. B. B. Browne said that he had used a similar method for five or six years. He did not think that a barren woman was as likely to conceive when stenosis had been relieved by this method as when it had been cured by cutting or forcible dilatation. In dysmenorrhœa the application of electricity removes attendant cellulitis, and he has never known it to excite inflammation.

Dr. J. J. Chisolm, after referring to the rather extravagant use of electricity in medicine at the present day, drew attention to the relative effects of the positive and negative poles.

Dr. T. A. Ashby said that the object of our experimentation with electricity now is to find where it is useful in medicine. In treating sterility from stenosis, he treats always the accompanying disease of the endometrium. The use of dilatation is, largely, to enable us to reach and treat the endometrium. Sterility on the woman's side is not always due to mechanical interference with the entrance of the seminal matter, even when there is stenosis of the cervix.

Dr. B. B. Browne said he would expect better results from dilatation by electricity than from other methods, but although he had treated the endometrium alike in all cases, those patients upon whom he had used electricity had not conceived.

Dr. J. J. Chisolm called attention to sterility of the male. Where this existed treatment of the uterus would of course not be followed by conception.

Dr. T. A. Ashby said it was his habit in these cases to examine the contents of the vagina and uterus for spermatozoa shortly after coitus. If spermatozoa were dead when removed from the uterus, he continued treatment till he could remove them alive, and then discontinued treatment for a time in hope of conception.

Dr. B. B. Browne spoke of Nœggerath's method of testing the capacity of the male. He believed that in many cases of sterility the male was at fault, as the result of gonorrhœa or stricture.

Dr. S. T. Earle read a paper on a

CASE OF BLIND FISTULA IN ANO, TREATED UNSUCCESSFULLY BY ELECTROLYSIS.

The case was one that resulted from a case of ischio-rectal abscess that I opened freely Nov. 19, 1888. After it had been opened, kept it well drained, and from time to time kept up gentle stimulation of the abscess cavity by the passage of probes twice each week; then, by injection of a strong solution of carbolic acid given at the same intervals, to promote healing. These efforts were continued until December 31, when the cavity had been apparently reduced to a narrow fistulous passage, but at that point it remained for several weeks without any appreciable improvement, when I decided to try the effect of electrolysis to promote healing of the fictitious track. I commenced with the use of the negative electrode in the sinus, using from thirty to fifty milliamperes for ten minutes, at intervals of a week, and continued in this way for three weeks, after which I used the positive pole in the sinus, with about the same strength of current for two weeks more. At the end of this time, finding no appreciable improvement, I discontinued its use, and, with a sharp pointed bistury, made a complete fistula of it, cutting through the intervening tissue, and left it to heal as an open wound by granulation.

Dr. J. R. Uhler said the chief objection he had to such methods as electrolysis in these cases was the length of time required to effect a cure, both doctor and patient becoming tired of the treatment. Many years ago he had seen electricity tried by Dr. Hammond, then of this city, in the use of Pulvermacher's chain in disease of the eye, the application of a silver-zinc couplet to chronic ulcers of the leg, etc. The cases now related suggest some thoughts. Did any one ever know a woman to conceive with a dilated uterine cavity? In his opinion a small uterine cavity is necessary for conception. In the use of deep electrolytic applications great caution should be exercised.

Dr. B. B. Browne said that when the cervical canal had been dilated by electrolysis the sound would at the next sitting pass more freely into the uterine cavity than when much more extensive dilatation had been practiced according to the old methods. He thought that perhaps the patulous condition of the uterine cavity after electrolysis had to do with the continued barrenness of the patient, the spermatozoa not being retained. In extensive laceration of the cervix women may conceive, but even then the cavity of the uterus *above* the internal os is not patulous.

Dr. T. A. Ashby said that the canal of the multiparous uterus would ordinarily admit a good-sized sound. He used the electricity chiefly to overcome abnormal spasm of the muscles about the uterine canal.

Dr. S. T. Earle said the case reported this evening was the first in which electricity had failed him. Heretofore he had had success in its use. A case which he reported some time ago, of extreme rectal stenosis from syphilis which he relieved by electrolysis, is still occasionally treated by him, and he is still very much pleased with electricity as applied to it. He thinks that many of the failures reported with this method are due to imperfect application of the current or to attending circumstances. This remark is with special reference to urethral strictures. In the case reported he had simply an abscess cavity, the walls of which he stimulated to action by electricity, hoping thus to effect a cure. In passing strictures we secure by electricity simply a relaxation of abnormal spasm.

Dr. T. A. Ashby said that he knew that the negative pole was the proper one to use, but having passed the sound in his case attached to the positive pole and obtained good results, he had continued to use the same pole throughout the treatment.

Dr. J. J. Chisolm said that in destroying hair-bulbs by electrolysis, the needle, in certain cases, will not go in without force before the current is turned on, and the part will bleed, but after the current is turned on, the needle will glide in of itself without bleeding, even when it does not enter the natural orifices. in the skin.

A. K. Bond, M.D., Secretary *pro tem.*

Translations from Our Foreign Exchanges.

Translated for Medical News, from the French, by Dr. Illowy, Cincinnati, Ohio.

LECTURES BY PROF. G. LEE, (PARIS)

Third part; or, The Therapeutics of Cardiac Remedies.

Physiological Definition.— What shall we understand by cardiac remedies? Do we find any direct and primitive poisons of the heart? If any such poisons exist they must naturally exercise their influence upon one or more of the elements constituting the heart. The principal elements are five in number:

1st. *The cardiac Muscle;* when this is attacked in a primordial manner by the poison (all cardiac remedies are poisonous in certain doses), this poison is denominated *muscular;* this is what has been said and maintained of the salts of potash, of digitalis, and even of strophantine; but this direct muscular action has been affirmed and denied.

2d. In the heart itself there are *masses of nervous matter,* of which some are considered as excito-motors, and the others (especially those placed in the sinus of the vena cava), as inhibitory nervous ganglions—as the inhibitory apparatus. Many poisons act upon the whole nervous apparatus. Among others muscarine, (the poison of mushrooms, toadstools,) to excite, and consequently arrest the heart; and on the other hand, atropine, to paralyze this apparatus, and consequently to accelerate excessively the beating of the heart.

3d. Outside of the heart, but terminating either in the muscle or in the group of nervous cellules last mentioned, are found the vagi nerves, which are inhibitory nerves; veritable veins destined to moderate the impulsion coming from the excito-motor ganglion; if these veins are broken (or paralyzed, as is done by atropine), the heart beats beyond measure.

4th. Besides these nerves which act as curbs, we have other nerves, nerves of an opposite influence, whose excitation provokes acceleration of the contractions of the heart; these are the accelerators coming from the sympathetic nerves.

5th. Finally, the action of the heart is intimately united with that of the vessels, and that of the latter with the vaso-motor centres, and the nerves of that name, which excite and contract the vessels, or, on the contrary, cause them to dilate, and determine thus the most opposite, and always important effects in the functioning of the heart.

In the actual state of our science, we have positive knowledge of many effects of cardiac poisons, and the constituent part of the heart acted upon, and this relation will be of great utility for the appreciation of the therapeutic actions of these poisons; but these acquisitions are still not sufficient for the clinician to abandon the practical point of view, which is as follows:

DEFINITION AND PRACTICAL DIVISION OF CARDIAC POISONS.

The practitioner should not and can not have anything else in view but to combat the principal phenomena, or the principal destructive changes of the heart, which dominate hierarchically the whole morbid scene. The sick heart produces frequently, from the outset:

I. The dyspnœa of work, and at a certain period, the chemical dyspnœa, through modification of the gases of the blood.

II. The functional troubles of the nervous system of the heart, or the degeneration of the cardiac muscle, or the alteration of its nutritive vessels.

III. At the advanced, or troubled period of the disease, when the muscle is stricken in its contractile energy, there are observed the dropsies with the whole apparatus of phenomena designated by the improper name of asystoly.

The cardiac remedy to merit this title should possess the power to combat one at least of these diverse manifestations. To be more perfect it should fulfill a double indication. There is not a remedy in existence that fulfills, satisfactorily, a triple destination. Here is a summary table, and a, at least, provisory classification of cardiac remedies, based on the preceding indication:

FIRST GROUP.

Cardiac Remedies almost complete Respiratory Remedies.

Iodide of Potass.—This is an indisputable *antidyspneic;* a *hyperaemiant* of the vessels of the medulla, of the lungs and of the vessels of the heart (coronary), themselves; finally, a *myotrophic*, that is to say, a modifier of the nutrition of the cardiac muscle, and of its constituting elements, when in the pathological state.

All that is wanting to iodide of potass. to be the veritable type of cardiac remedies, is a diuretic action upon the kidneys; it favors, it is true, the urinary secretion, by its being eliminated through these organs, but its power does not surpass the normal. Thus when we associate with iodide of potass. milk, or rather the milk diet, the cardiac medication is carried perhaps very far, and very certainly without the assistance of any other agent. We shall prove these facts in detail.

Atropine.—In default of the iodide as antidyspneic, we must not forget the *atropines*, as auxiliary, or complement, as recent and new experiments have demonstrated.

Pyridine.—The respirations of pyridine serve very preciously for the same purpose. It is the same with the *injections of morphia*, though dangerous, and with the injections of *antipyrine*, less efficacious, but inoffensive.

Erythropleine.—It is well to mention erythropleine, with which we are again occupying ourselves.

SECOND GROUP.

Tonicardiac Remedies.

Sparteine.—Sparteine, this alkaloid, with its manifest effects on the tonicity of the heart, and on the pressure, as we have demonstrated them in conjunction with Laborde, is not under discussion any more in other lands. In France it is almost unknown; one is not a prophet at home. I shall establish that, contrary to certain other observers, I have never attributed to sparteine any diuretic power.

Strophantine.—This is a glucocide; it is the most powerful and most energetic agent to elevate the action of the heart, producing at the same time, and contrary to the informal experience of clinicians, with strophanthus, an immense vaso-constriction, which is accompanied by a singular and enormous elevation of intravascular pressure. We shall discuss once more further on this remarkable property.

Tonicardic and more or less Diuretic Medicaments.

DIGITALIS AND DIGITALINE.—Digitaline, as we can assure ourselves by the experimental method, is a real tonic of the heart, but with a move much slower to manifest itself, and more feeble in reality than that of strophantine, of which it does not possess the power to produce a veritable vaso-constriction. Its elective or selective actions on the elements of the heart are but imperfectly known; it is not known whether it excites the inhibitory system, when it slows the movements of the heart, or whether it is upon the cardiac muscle itself, when it gives the amplitude of pressure.

CONVALLARIA MAIALIS AND CONVALLAMARINE.—I shall not repeat here my observations on maialis, which were inspired by Botkin, and made by Bochefontaine. As the extract contains at the same time convallarine, which is a drastic purgative, I obtained by the aid of M. Wurtz, the veritable active principle, convallamarine, which also is classified in all the foreign books, or pharmacodynamics, with digitalis, and as its best and most inoffensive substitute. It is, in fact, like it, a heart tonic and a veritable diuretic. Its only inconvenience is its high price.

SALTS OF POTASS.—Their action, studied about thirty years ago by Traube, manifests itself by effects analogous to those of digitalis, if employed in small doses; and also like digitalis, in large doses, they end by producing paralytic accidents of the heart muscle, or of its intra-cardiac, excito-motor system.

THIRD GROUP.

Diuretics, properly so-called.

I only mention the principal ones: The *milk*, which surpasses all other diuretics in effect as in innocuity.

Adonis Vernalis, and as yet but little studied.

Caffeine, to which I shall devote some development.

Calomel, which I have tried, from the articles of foreigners.

Strophantus, which seems to be a diuretic by caprice, like calomel, on well-defined occasions; that is, only in cardiac dropsies.

Additional Series.

To these remedies, truly cardiac, must be added:

I. The *vascular* stimulants, of which certain principles of ergot represent the clearest type.

II. The vaso-motor depressors, which are represented under divers tables, by *chloral*, and *nitrite of amyl.*

III. The sedatives terminate the series. It is the bromide of potassium which concludes, after having calmed the general nervous system, rather than the heart, by determining a veritable depression of the heart.

IV. It is the antypyrine which suppresses all the pains, direct or symptomatic, all the cardialges without producing the least change in the blood, without determining the least modification, either of the heart, or of the pressure, as we have observed in numerous experiments, and as Botkin has affirmed, after physiological researches of rare precision.

We shall describe all the effects of the iodide of potassium; we shall detail all the phenomena of diuresis, which caffeine produces, which will serve as a comparison with strophantus.

IODIDE OF POTASSIUM.

TYPE OF THE MOST COMPLETE CARDIAC REMEDIES.

What are the modifications that the iodide of potassium produces in the organism? I recognize for it three genres of influence which are found in a rudimentary state in the normal organism; I note

(*A*). *The antidyspneic secretory action of the iodide* in large doses, which is the most curious and the most constant, and which I demonstrated for the first time in July, 1878, before the Academy, in the matter of treatment of asthma, by the iodide, which had up to now been prescribed in inefficient doses (by Trousseau and Sydney Ringer). This respiratory, which, since my publications, is uncontested, rests upon the bronchial hypersecretion, which frees the bronchi, encumbered as they are by the catarrhal secretions which are so adherent and compact as to prevent the penetration of air into the bronchial tubes, and the interchange between the intra-pulmonary gases, and the ambient air.

The antidyspneic action of the iodide rests upon still another mechanism; I refer to the action upon the respiratory center, or rather upon the circulation.

(*B*). Its *hypo*[illegible] (congestive) action. We know by experience and by experiment that the iodide produces everywhere, in the mucous tissues in the skin, veritable hyperæmias, which may reach the extent of hemorrhages; epistaxis, ecohymotic patches, hemoptyses, metrorrhagias, are the most frequent; we can, therefore, say that the iodide is a veritable *general hyperaemiant.*

Is this from a stimulation of the vaso-motor center, and especially of the vaso-dilators? it is of but little importance; the fact is undeniable, and this is the consequence. In congestion of the respiratory centre, the iodide causes the blood there to circulate more rapidly, renews it, and thus prevents the dyspneic blood from acting on the medullary center in a prejudicial manner; the activity of the exchanges is increased and the medullary blood tends to become dysasphyxiated, so that the respiratory centers are superstimulated in their functions, which were in a rather languishing state; hence the easier and freer respiration. In the patients affected with heart-disease, as soon as the iodide begins to act, dyspnœa, whether continuous or paroxysmal, the attacks of suffocation, the threatening asphyxias disappear, with the incessant dangers to which such patients are exposed.

Here we have the two first effects of the iodide; it is not necessary to explain the improvement of the phenomena to invoke the coagulatory action of the blood, which is false.

The intra-pulmonary circulation itself is stimulated by the iodide, which, in hyperæmiating the pulmonary tissue, removes the venous stases so frequent, so grave, in the pulmonary vessels. This is, therefore, a respiratory remedy, and, I add, a pulmonary one. Here is the proof: By the minute researches made in my laboratory, under my directions, by one of my assistants, Calmeil, this important fact is demonstrated: that iodine, or rather the iodide, accumulates in enormous quantities in the lungs, more so than in other organs; it facilitates thus the pulmonary circulation; iodine is a pulmonary remedy. And we now know that the dyspnoea of work is also a pulmonary dyspnoea.

(*C*). *Oxidizing and trophic action of Iodine.* The third species of action is one very much debated. It pertains to *oxidizing* and *denutritive* action of iodine. In the physiological state it reduces a certain number of tissues and of glands, especially the adipose tissue; in the pathological state, especially in large doses, long continued, it produces atrophy of hypertrophic lymphatic glands, of the thyroid, of the mammary glands; of syphilitic, scrofulo-tuberculous, inflammatory neoplasms. But in these latter instances what is it that diminishes? Evidently the reduction bears not on the bacillary, or virulent, or general microbic productions, which it is impossible to destroy; but on the new tissues, either on the hyperplastic connective tissue, or on the fatty elements which contribute to the formation of degenerations; the cure, therefore, does not depend on a specific action on the organs or system virulently affected, but on a modification of the general nutrition, a modification advantageous or prejudicial, for, if the patients are cured, they frequently gain in fat; if they do not recover, they lose in flesh, and grow lean; it is the end of the malady which allows the first to gain in flesh, to grow stout; it is the continuation of the malady which opposes any improvement in the general condition.

But this denutrition, in the latter instance, does not at all resemble an exaggerated oxydation, for if it were so, the waste materials resulting from this denutrition, should pass into the urine, in the form of urates; however, we find that Rabuteau and Fubini verified by experiments upon themselves, and upon patients, rather a diminution of the urine; hypernutrition and oxydation are not synonymous; in this particular case the iodine acts upon the tissues, by reason of its well-known affinity for hydrogen, and there is produced an *iodohydric* acid, at the same time that there occurs a *destruction* of the molecular layer of certain organized elements.

Another affinity of iodine has been admitted, namely; for the albuminates of the organism; but this combination is not stable, and is easily destroyed by the coagulation of the albumine; the alkali released from the albumine combines with the iodine to form an iodide and an iodate. These two salts circulate side by side in the blood, which remains perfectly intact, for the albuminates and even the solutions of hemoglobine can absorb a sufficiently notable quantity of iodine without losing their characteristic properties. Furthermore, the neutral iodohemoglobine presents the same appearances under the spectroscope as the oxyhemoglobine. We see that we are far from the process of oxydation; but let us not forget the congestive action, the circulatory effort, which iodine impresses upon the heart tissue, whether hypertrophied or degenerated.

Resume.—The iodide has a certain and triple antidyspneic action, by liquefying the products of bronchial catarrh and permitting the air to penetrate, by hyperæmiating the lung where the blood is stagnant and slowed, by stimulating the circulation in the medulla oblongata, where the respiratory center is only acting with dyspneic blood; that is to say, with too little oxygen, and too much carbonic acid. By the side of iodine, there does not exist a veritable anti-dyspneic remedy; perhaps atropine might be utilized.

II. DIURETICS IN GENERAL.—CAFFEINE.—The diuretic remedies *can be* divided into three groups: The one which appears sufficiently well established, and depends on an excess of pressure of the blood in the arterial system in general, and in the arterial vessels of the kidneys in particular, is the one in which *digitalis* and *convallamarine* take a place.

The second group comprises the osmotic diuretics, as the alkaline salts, and especially those of potass.; but as the salts of potass. act, in small doses at least, upon the heart and the vessels, by raising the blood pressure, it seems that they should rather be placed in the first group of diuretics.

The third group merits a special name by reason of its novelty and its importance; these are the *renal substances* which act directly upon the epithelium of the kidneys, without the intermediation of the so-called secretory nerves, or even of the vessels; the greater part of these are irritants, and without speaking of these that after the manner of the resins of copaiva, and especially cantharides, determine a veritable inflammation of the kidney, without any true diuresis, we shall at once proceed to the study of the renal diuretics, which are utilized in diseases of the heart. The most important of these are caffeine, calomel, and strophantus; all three are veritable alteratives of the kidneys.

We shall take caffeine as the type:

CAFFINE OR THEOBROMINE.—Renal and non-cardiovascular poison. Caffeine, like digitaline, has provoked irrational enthusiasm. Both are placed in the same rank to elevate the blood pressure, and to provoke diuresis; but if digitaline raises the blood pressure, it is undoubtedly by acting on the muscle; whilst if caffeine augments the tension, it is by excitation of the vaso motor centers.

But if, whilst suppressing the action of the vaso-motors, and consequently the pressure altogether, we nevertheless succeed in producing diuresis, it is then evident that this secretion is the result of a direct irritation of the epithelium of the glomeruli, or the tortuous canals—this is precisely what occurs—Schroeder, (Archiv. of Experim. Phys. 1886), annuls the pressure by injecting into a rabbit a large dose of chloral, which is the true depressor

—0.67, for each kilogrm. of body weight; this injection did not at all diminish the urinary secretion, although the manometer fell from 100 millimeters of mercury to 60. Administering afterward caffeine, he found, as also did Wagner, (Dissert. Berlin, 1888), that the pressure was not at all raised; on the contrary, that it remained below the normal, and that, nevertheles the caffeic diuresis was clearly established. If the excitability of the vaso-motor centres is diminished by a narcotic, as paraldehyde, instead of suppressing the vaso-motricity, the secretion still as clearly continues.

If now, (still according to the same author), the composition of the urine be examined, it is seen that the diuresis does not consist solely in a more marked elimination of water, but that the secretion contains an excess of solid elements and of urea. This is then a diuretic in the full sense of the word.

This is at the same time the proof that this diuresis is also independent of the nervous system, central or venal. The enervated kidney does not the less continue to secrete. We must therefore seek elsewhere for the mechanism of this diuresis. It is the cellular parenchyma itself which is called on to play this role.

Caffeine therefore prevents a renal action, stimulating and secretory. Recently this effect has been obtained, and still more markedly, with a substance altogether unexpected here; it is an alkaloid almost identical with caffeine, a derivative of chocolate. Caffeine is considered a trimethylxantine; if one element of methyl is removed, there results a dimethylxantine, which is none other than theobromine, which has the double advantage, 1st, of producing a more considerable diuresis, without the least sign of intoxication, as may occur with caffeine; 2d, of maintaining a rapid and persistent diuresis. Theobromine must be given in doses four or five times larger than caffeine.

Conclusions.—By one or the other of these alkaloids, the loss of water by the urine entails an impoverishment of the blood in its watery element, and this dehydration renders the blood capable of absorbing the effused fluids; hence, by the action of these powerful and prompt diuretics, as caffeine, calomel, the œdemas disappear.

The effects of the strophantus, which do not show themselves till after the lapse of five or six days, and then only scantily, can not be compared with these true renal diuretics.

—*Trib. Medic.*

Selections.

Chronic Intestinal Obstruction—Report of Case and Operation.

BY WILLIAM PHIPPS MUNN, M.D., ALLEGHENY, PA.

Paper read before the Allegheny County Medical Society, Sept. 18, 1888.

CASE.—Mrs. E. A., aged thirty-one, is the mother of five children, the youngest aged eleven months, the oldest is twelve years of age. Two years ago she began to be of a constipated habit, but had no special medical attention. Early in 1887 she became pregnant, and in October was delivered at full term by myself. Her confinement was uncomplicated, and her recovery uninterrupted. She resumed her household duties sooner than I thought advisable, on account of not being able to secure proper help. She never became quite as robust as she had been, and complained of constant dragging pain in the back and pelvis, but especially on the left side; the tendency to constipation continually increased, her general health failed in spite of tonic treatment, and her face assumed a cachetic appearance.

In January I was called to see her on account of a more than ordinarily obstinate attack of constipation, the bowels not having moved for seven days, although enemata had been employed every day. During the next three days she took successively calomel, twenty grains in divided doses, castor oil, sulphate of magnesia and sulphate of soda, but without any effect. Then I prescribed an aloin, strychnia, belladonna and ipecac tablet every three hours; by mistake she took one of these every hour until twenty had been taken, at the same time using hot water enemata twice daily. No effect was produced beyond excessive tympanites. Digital examination of the rectum showed it to be empty: *per vaginam* a sensitive induration was discovered posterior to, and slightly to the left of the uterus.

Dr. W. S. Foster now saw her in consultation. Placing her in Sims' position, with the hips well elevated, we introduced the long tube of a stomach-pump into the rectum, until it encountered some obstacle at or near the sigmoid flexure, which was partially passed after a little careful manipulation, and then injected about a quart of hot water into the bowel. She could feel this passing through the descending and transverse colon, but on rising and using the chamber, only the water retained in the rectum was evacuated; the remainder drained away slowly after several hours, but only one or two small lumps of fæcal matter passed. Five times in the next three days I repeated this maneuver, adding each time an ounce of castor oil to the warm water in the syringe, and she finally had a free fluid movement, very large in quantity. This was on the fourteenth day, and all this time, although the abdomen was somewhat distended and the pelvic pain continued as before, there was no elevation of temperature or any other sign of peritonitis.

Following this attack she improved much, but it was found necessary to keep the contents of the bowels in a fluid condition by the daily administration of salines; neglect of this for twenty-four hours was invariably followed by a recurrence of the old symptoms, and necessitated a return to the long tube of the stomach-pump, as before. All this time she kept up the daily use of the hot vaginal douche; but, notwithstanding this, the induration in the posterior *cul de sac* appeared to increase; the left ovary could be isolated by careful bi-manual examination, and though somewhat enlarged and very tender, it was very slightly movable. The right ovary seemed to be normal in size, location and mobility, but was abnormally sensitive. Her pelvic pain radiated from the ovaries, and was constantly increasing in severity. Early in March an attack of peritonitis threatened, but was averted by the free and persistent use of saline cathartics. Following this she gained strength for several weeks, and at the end of the month she was able to be out of bed for a few days, but the improvement was only temporary, and the end of April found her once more bedridden. Two attacks of localized peritonitis occurred between this time and the 10th of June, and each time the patient rallied more slowly. Her appetite began to fail, and even the semi-daily administrations of salines failed to keep the contents of the bowels soluble. The contant catharsis was also a severe drain on a naturally strong constitution.

The exact nature of the obstruction could not be determined, but it was certainly at or near the sigmoid flexure. The possible conditions were from: 1st, simple stricture or narrowing of the bowel; 2d, a neoplasm, perhaps malignant, involving the bowel at this point; 3d, constriction by fibrinous bands, resulting from peritonitis; 4th, a tube or ovary, probably the left, attached to the bowel as a result of inflammatory action and forming the obstruction.

Palliative and expectant treatment and persistent use of electricity having utterly failed, and the patient's condition becoming progressively worse, operative interference seemed the only resort, with the view of removing the obstruction if possible; and, if not removable, to then stitch the bowel to the abdominal wall, and establish a fæcal fistula.

Accordingly, on July 13, assisted by Dr. W. S. Foster, I opened the abdomen by a linear central incision five inches in length. The whole length of the bowel, except the transverse colon, which was inaccessible, was carefully examined for constricting bands, but none were found; no stricture could be discovered, there was no new growth. Thus far the examination was negative.

Pressing the abdominal wall well down, I was able to draw the sigmoid flexure into the wound, and found the left ovary cystic and about an inch and a half in diameter, dislocated into the *cul de sac* of Douglas, and adherent by its posterior surface to the last movable portion of the intestine. The uterus was enlarged and slightly retroverted. I carefully tore through the adhesions of the ovary to the sigmoid with my finger-nail, ligated the bleeding hæmorrhoidal vessels with silk, and approximated the torn edges of the peritoneal coat of the bowel with a continuous horse-hair suture; then ligated the ovarian pedicle and the Fallopian tube with twisted silk, and removed them both. The right ovary, on examination, proved to be cystic also, and was removed. Adherent to the great omentum there was found a colloid body about a half inch in length, similar to those I have seen in cases of ruptured ovarian cysts with colloid contents. This was ligated and clipped off, but was unfortunately mislaid, and the opportunity for a microscopical examination lost.

There was almost no hæmorrhage during the operation, and what little blood escaped into the peritoneal cavity was rinsed out with previously boiled hydrant water. After sponging this out the wound was closed, and an impervious antiseptic dressing applied. No suppuration occurred, and the stitches were all removed by the fourteenth day. Convalescence was uninterrupted after the second day, although up to that time persistent bilious vomiting occasioned some anxiety. The bowels were fully evacuated on the fourth day by the use of saline purgatives, and after that moved naturally and unaided, except by an occasional aloin strychnia and belladonna tablet every day or every second day. One slight attack of constipation lasting four days, occurred six weeks after the operation. Two weeks ago she went alone on a visit to relatives in Cleveland and Toledo, and before starting made two shopping tours in the city. She is still in Ohio, and writes to her husband that her strength does not return rapidly, though her appetite and digestion are good. She makes no mention of the condition of the bowels at present.

I report this case on account of the novel cause of the intestinal obstruction. So long as the bowel contents were perfectly fluid they passed the point of obstruction easily; but once they became of normal consistency, and accumulated in ever so small an amount above this attached obstacle to the last movable portion of the bowel, and the ovary would be pushed down between the promontory of the sacrum and the slightly retroverted uterus, closing the entrance to the rectum very much after the manner of a ball valve. The prompt relief following the removal of the ovary is a practical reply to any theoretical objection to the operation.

I wish to state distinctly that this was not a premeditated oophorectomy; had the ovaries been otherwise healthy, I could simply have freed the bowel from them, and perhaps anchored each ovary to its proper broad ligament by a catgut suture, but the peritoneal cavity being already opened, and both ovaries discovered in such a degenerated condition as to be functionally useless, and a source of danger if allowed to remain, their removal was determined upon with as little hesitation as if they had been foreign bodies.

* * * * * * * *

In reply to an interrogation, Dr. John Ashhurst, Jr., has kindly given me the following statement of similar recorded cases:

PHILADELPHIA, August 17, 1888.

Dear Sir: Your letter of 16th inst., is received. In the International Encyclopædia of Surgery, vol. vi., p. 74, I have tabulated thirty-seven cases of laparotomy for obstruction of the bowels from tumor, strictures, ulcers, etc., ten of these thirty-seven cases having ended in recovery. I have since added to my list eleven cases, of which five are said to have terminated favorably, so that the figures now stand thus:

Recovered	15
Died	30
Undetermined	3
Total	48

Very truly and respectfully,

JOHN ASHHURST, JR.

In Dr. W. Gill Wylie's report of seventy-nine laparotomies during the year 1887, there are two cases of partial intestinal obstruction from "adherent appendages," and one due to chronic pelvic peritonitis. All of these three cases recovered.

The death rate in Dr. Ashhurst's table is higher than one would expect from such an operation performed antiseptically. This I would explain by supposing that many of the tumors and strictures were malignant in nature, or required resection of a portion of the bowel. In my case only the peritoneal coat of the sigmoid was torn, and this was easily brought together by the continuous horse-hair suture, the operation being otherwise uncomplicated.—*New England Medical Monthly.*

Druggists and Physicians.

BY RALPH ST. J. PERRY, M.D.

Just at present the medical and pharmaceutical world seems to be unduly wrought up over the code question of the relations which should exist between druggists and physicians. Why this should be we can see no apparent reason—it is simply one of the things that be—a spontaneous eruption of pent-up thought. As most of the talk seems to exude from the pharmaceutical side of the discussion, it is likely that some prominent drugger has had [illegible] toes stepped on by some careless M.D. Perso[illegible] consider this code business all bosh, and [illegible] our position, as a practitioner, compe[illegible] we would not recognize any other [illegible] the Go[illegible]

Rule. We can say that in three-fourths of the cases of disputes between druggists and physicians, the latter are in the wrong. Nine-tenths of the troubles can be blamed on the ignorance, egotism and miserable penmanship of the physician.

Ignorance, yes, stupendous. In our short experience (14 years) in medical affairs, we have met very few practitioners who had any idea of pharmaceutical processes and manipulations, or of incompatibilities, either chemical or therapeutical. The average medical student looks upon his laboratory work as so much manual work to be completed—the sooner the better. Chemistry is the "Jonah" of his course, something to be avoided, and pharmacy is an unknown quantity within his cranium. Every issue of our numerous pharmaceutical periodicals contains copies of prescriptions calling for impracticable heterogeneous conglomerations which have been submitted to experts for solution. Should the druggist attempt to instruct the prescriber concerning his mistakes, he is looked upon with contempt, and thereafter all patients are instructed to avoid that particular druggist, *i. e.*, if the doctor dares do it.

That a physician's egotism is predominant in his knowledge of medicine, there is no doubt. He looks upon the druggist as an inferior being who is to do his bidding, wink at all mistakes, furnish him his medicines for his pocket case free, send all prospective patients to him, maintain a telephone for him if desired, and furnish a loafing place, etc., etc., *ad lib.*, *ad nauseam.*

And should the druggist decline to immediately fill some prescription in which there is a mistake or an omission, gehenna is elevated p. d. q. He may think it has an effect to "cuss and damn" a druggist in the presence of a patient because he insists on having a mistake corrected. It undoubtedly does, but not so much to the doctor's benefit, as the patient invariably notes the fact that the druggist is in the right, and that he has acknowledged his mistake by correcting the error. It will be found much better for him to correct the same without any ostentatious ceremony, and we know of very few men who will do this. To poor pen-
[illegible] it might be better to call it imitation penman-
[illegible]ardly resembles the genuine article, are due most
[illegible]rrors; non-admissible abbreviations, incorrectly
[illegible] and Roman numerals which look like incipient
su[illegible]ing, all tend to swell the caravan. True,

it is said that all smart men were poor writers, and many affect their style under the delusion that they may be mistaken for smart men, yet if mental supremacy is to be cultivated at the expense of manual dexterity, it is better to equalize before things become reduced to chaos, and writing an unknown art. Medical colleges now require an "entrance" examination of more or less severity (principally less), yet few there are who fail to pass, and with this *prima facie* evidence before the faculty, that few of the matriculants possess a thorough knowledge of spelling and writing. Look into the note-books of a medical class, and you will find specimens of orthography which would make Josh Billings blush. We know one physician who realizes his inability to write Roman numerals correctly, and so uses the Arabic system; while we do not sanction his ignorance, we do admire his good sense in adopting something which he can make others understand.

Counter-prescribing is a thorn in the flesh of the average physician. The laws of Indiana prohibit it, yet the persons whom the law is intended to protect do not try to enforce the law. It is somewhat presumptuous to expect a druggist to cut his own throat by enforcing the law against himself, for such is what it is. For instance, a customer comes to a druggist and wants something for rheumatism, or a boil, or gonorrhœa, or any of the numerous complaints which are brought before the counter; the druggist tells him to go to a physician for examination and a prescription. What does the customer think? Does he think the druggist is ignorant of suitable remedies? Not much! He looks upon the druggist as a schemer, who does not want to sell him a reasonably-priced remedy, but wants him to go and get a prescription, so he can gouge more money out of him. Result—some other druggist secures the ducats. So long as our pharmaceutical friends confine their depredations to minor offenses, I see no harm done, as the practitioner would seldom get such cases anyway.

There is a thorn in the druggist's flesh also, and that is proprietary goods. There are thousands of dollars of dead stock of this class upon the shelves of our drug-stores, which were not bought for speculative gain, but upon the order of physicians. A prescription is received calling for half an ounce of some specified proprietary goods, and to fill the order a pound-bottle must be bought; probably a dozen other orders are filled, and then some new nostrum catches the doctor's eye and the old one is discarded, leaving the druggist with half a pound or more of useless *slop* on hand. To say that business men appreciate this practice would express it only mildly; they rave over it, go into convulsions of delight, while the M.D. sits in his office and gulps down the seductive gab of the slick representative of the whang-doodle chemical company, whose products are manuufactured by a new pharmaceutical process unknown to the world, bound down by iron-clad secrecy, etc., all of which assertions have "LIE" stamped on their faces in boldface type; but the lie is carefully covered over by a skillful arrangement of a good supply of samples. Why are the doctors so easily gulled by the manufacturing chemist? Simply because they do not know enough of pharmacy and materia medica to make their own preparations, and grasp the lie. The spirit of the code of ethics prohibits secrecy, yet those who exalt this code to the realms above will turn right around and write laudatory certificates for some compound of which they know nothing, yea even for a proprietary mixture of cheap whisky and buttermilk. Physicians and pharmacists practice their profession for money, notwithstanding all their altitudinous effusions on the love of science, and it is nothing more than right that there should be that reciprocity of feeling and action between them as exists between other business men. They are the only professions which have seen fit to establish a code of ethics for their government, and yet they have more rows and internal dissensions than any half dozen other vocations put together. Away with codes.

This was intended as an expression of a physician's views on "relations," but I fear that the knowledge of my fellows, gained during my experience behind the prescription case, has somewhat prejudiced my thoughts; however, it expresses my mind.

Stretching the Sphincter Ani as a Method of Cure in Obstinate Constipation.

BY CLEMENT CLEVELAND, M.D., NEW YORK CITY.

THE operation of stretching the sphincter ani for the cure of fissure of the anus is one that has been long in vogue, and rightfully holds its position as the quickest and surest method of relieving that troublesome affection.

It is the custom of some operators to stretch the sphincter after perineorrhaphy, to keep the muscle in a quiescent state during the first few days, the belief being that thus a greater chance of complete union is assured. I have had faith in it myself, and often practice it where I think there is any risk from such a source.

I long ago observed that in many cases thus operated upon, in which obstinate constipation had existed, that could not be attributed to pouching of the posterior wall of the vagina, the constipation was cured. I noticed the fact, without at the same time thinking of its application to cases of constipation where no fissure existed, till April of 1884, when a case came under my care that baffled every effort to relieve; it was then it occurred to me to stretch the sphincter.

The patient was a young woman, twenty-five years of age, and unmarried, whose occupation was a sedentary one. She had been bred in affluence, but loss of property had compelled her to seek her own living, and she secured employment as an amanuensis. Her sedentary life, with much worry and anxiety, led to carelessness about the requirements of health. She took little or no exercise, and used cathartics and enemata to relieve the bowels. When I first saw her the trouble had lasted several years, and had become so difficult to relieve that she was fairly desperate. It was the worst case I have met with. There was no abnormal sensitiveness of the sphincter. Examination revealed no fissure, the fæces were of good color, but hard and dry, and often broken up into scybala, and there seemed to be no intestinal secretion whatever. There was no discoverable obstruction in the pelvis or elsewhere. It was evidently the result of fixed habit and the constant use of cathartics and injections.

There are cases, I am aware, where the bowels are not relieved for days at a time and the person remains in good health, this being apparently the normal condition. Such, however, was not the case with the one I am now speaking of. She was in constant distress, though without actual pain.

The operation being decided upon, the patient was placed in Sims' position and the sphincter thoroughly stretched, and so thoroughly was it done that some of the fibres of the external sphincter were torn. As an immediate result there was a prolapsus of the rectum, which, from its swollen turgid condition, was troublesome to keep replaced, till the patient had recovered thoroughly from the etherization. It is not necessary to stretch to the point of rupturing the muscle, even to a slight extent, though no apparent harm was done in this case. It is, however, difficult to avoid sometimes, the muscle giving way before the operator is aware. This patient was cured, and has never had a return of the trouble.

Another case was that of a young woman, of about the same age of that of the previous patient, and she, too, had been suffering for several years. In this case there was a complication of disorders; constant pain in the uterus and ovaries; constant desire, with inability, to relieve the bladder; menorrhagia and obstinate constipation. The uterine and bladder troubles were of late development.

Examination revealed a large, sensitive, anteverted uterus, with excessive sensitiveness in the region of the ovaries, and large fæcal accumulations in the rectum. There was pus and blood in the urine, and blood in large amount in each passage from the bowels.

She had been taking a small amount of morphia each night at bed-time.

To move the bowels she used a bottle of sweet oil every other day. Cathartics, except in very large doses, had lost their effect. The oil seemed to produce a better effect than anything else, so for some time she had been using that alone. The relief, even with this, was not perfect.

The urine was drawn every other day by catheter, and was sometimes allowed to remain in the bladder three or four days a time. The condition of the patient can be imagined. Her nervous system was in a deplorable state. She was anæmic, and had lost much flesh.

I attributed most of the pelvic symptoms to the obstinate constipation, from the constant pressure of large fæcal masses upon the intrapelvic vessels and nerves, and decided that something must first be done in that direction before attempting any treatment of the uterine and ovarian conditions. Accordingly the patient was placed under ether and the sphincter thoroughly stretched. In the after-treatment I used small injections of glycerine, for a week or a little longer, after which there were daily evacuations for some time. With the relief of the rectum and colon, aided by local treatment and medication, the cystitis was cured, and the uterine and ovarian trouble improved, though the constant pain and sensitiveness in one ovary — the right — continued. For this reason it was impossible for the patient to take exercise, and notwithstanding the care and attention paid to her diet, she was troubled greatly by indigestion. At the end of two months there was a return of the constipation, as I feared there would be. Having experienced so much relief from the first operation, she was anxious to have it repeated. This was done, and followed, as before, by relief. The patient was growing stronger all this time, and the digestive functions were performing their work better; but winter came on and she was confined to the house much of the time. In the s pring, after a period of four months, she began to experience some little difficulty with her stools, though constipation had not recurred to the same degree as before. During the winter my attention had been devoted to reileving the pain and sensitiveness in the ovaries, but with slight and only temporary success at any time. I had commenced to fear that the ovary would have to be removed; but asa last resort, before coming to that, I decided to put in a seton. The patient was again etherized, and a deep seton, consisting of fifteen strands of twisted silk, was introduced over the right ovary, and afterward the sphincter again stretched. To cut short this part of the history, the seton began to afford relief almost at once, and the pain gradually disappeared. It was worn five months, though after the fourth month rarely was even a twinge of pain felt in the ovary. It was worn for so great a length of time because the patient was reluctant to have it removed, and because I wished to be sure of its permanent effect. It is now eight months since the seton was introduced and the sphincter stretched, and three months since the seton was removed. There has been no return of pain and sensitiveness in the ovary, and no return of the constipation. The patient appears perfectly well. Though the treatment of ovarian disease forms no part of the subject of this paper, yet I have introduced it here because the two conditions were so closely associated in the same patient, and because the constant pain in the ovary may have been, and probably was, a factor in the causation and continuance of the constipation.

I have had quite a large number of cases, ten in all, the details of which would add but little of interest in the discussion, and I therefore omit them. The first history related is of a typical case, and the second of a very unusual one. They serve my purpose as illustrations.

In but one case, the one last related, was the operation repeated, and here it would not have been necessary but for the complications presented.

The theory of the operation is, of course, simple and easy of explanation. When fæcal matter passes from the colon into the rectum, it there arouses the conjoined muscular action which is to expel it. The action of the sphincter muscles is twofold, that of a barrier to involuntary movement, and an aid to expulsion of fæces. The internal sphincter is merely an aggregation of intestinal muscular fibres, and the joint action of both sphincters, in aiding the expulsion of fæces, is the same as the peristaltic movements of the intestines, only much more powerful. Where obstinate constipation of long standing exists, the general condition is usually debilitated. The rectum is distended by hard, dry fæces. The sensibility of its nerves is blunted and the contractile power of its muscular fibres is so enfeebled that, even with the aid of the expiratory muscles, it is unable to overcome the resistance of the sphincter to the passage of large fæcal masses. The sphincter is here a barrier merely. It is stimulated to excessive action by the hard mass packed up against it, and can not grasp and aid in its downward movement.

Where the integrity of the sphincter is lost, as in complete rupture after childbirth, there is nothing to check the involuntary action of the rectal muscles, and involuntary evacuations are likely to result. Where the operation of stretching has been done, the sphincter, no longer able to contract forcibly, offers but a passive resistance to the passage of fæces. It can check the effect of involuntary action of the intestines, but not when the expulsive force of the expiratory muscles is brought into play.

And now a word as to the selection of cases for the operation. There are but few, no matter what the cause, whether of local or general origin, that are not, in my judgment, helped by it. But, as a curative agent, it is strictly applicable to cases whose causes are genetal, such as habit, improper diet, the abuse of cathartics, enemata, etc.

I do not advocate its employment indifferently. A careful investigation should be made, and an accurate diagnosis arrived at, if possible. The treatment does not end with the operation. It is really but the first step, while the after-management is the most important. It enables the expiratory muscles to prevent the accumulation of fæcal matter, and gives the rectum time to recover its power and sensibility. It gives the digestive functions rest from the constant and disturbing effects of laxative medicines, and above all, from the constipation itself, which certainly disturbs primary digestion, destroys appetite, and, in its remote effects, produces anæmia and wasting. Rest afforded to the digestive function, I reiterate for the sake of emphasis, is, perhaps, the most important factor in the cure.

As I have said, the after-care is as essential as the operation, and a physician can not be too careful and positive in laying down rules that he should insist upon being followed. It is as easy for the patient to relapse into the former condition as it was to form the habit originally, if all causes which lead to the trouble are not sedulously avoided. Careful attention must be paid to diet especially. A suitable and proper amount of exercise suited to each individual case should be insisted upon. The skin should be kept in an active condition by bathing or sponging with cool water daily. The importance of regularity of going to stool can not be too strongly urged.

I have not attempted to look up the literature of this subject, and I do not know but what I am treating of an operation which others have previously done and described. I have, however, tried to keep informed, and do not think the operation had been done previous to my first case—strictly, I mean, for the purpose of curing constipation. —*Medical Record.*

True Tumors.—Their Origin.

BY DANIEL MORTON, M.D.

Read before the Saint Joseph Medical Society, March 2, 1889.

It is my purpose to direct the attention of this Society to several thoughts bearing upon tumors, especially such as refer to the etiology of these growths. Interest has been directed to Conheim's theory in the United States, particularly by the lectures of Dr. N. Senn, and their perusal first incited me to study this subject.

A tumor is an atypical proliferation of tissue from an embryonal matrix. There are two terms used in this definition which require elucidation before one can thoroughly understand the meaning.

At a certain point in the development of the human ovum, it consists of a central cavity enclosed by two layers of cells, one next the vitelline membrane, the epiblast, another interior to this, the hypoblast. Later on a third layer of cells, the mesoblast, develops between these two layers, the origin of which is still an undecided question. It is believed by most investigators to be formed by cleavings from the hypoblast, the minority claiming the epiblast as its derivation. From these three layers of cells all the structures of the body are derived, each layer producing the following tissues: The epiblast is mainly concerned in the formation of epidermis and nerve centers, the hypoblast, in the formation of the internal epithelium and the mesoblast in the formation of the remainder of the fœtus, viz: The vascular and locomotor systems, the dermis, nerves and connective tissues. During the rapid changes which occur at this time of life, portions of one of these layers may become incorporated in one of the other layers and there remain latent, constituting an "embryonal matrix," the alpha of a tumor. This is most likely to occur at the junction of skin with mucous membrane; for example, the eyes and lips, the displaced portion of embryonal tissue being separated from the rest by constriction, as normal growth goes on about it. These accidents occur when the most complicated histological changes during embryonal life are going on, as in the genital organs. But, one may say, is it possible for such accidents to occur in the hands of that unerring architect, Nature? What of the monstrosities we so frequently see and read of? Are they not accidents of intra-uterine life? How account for general giant growth, supernumerary organs and members, other than on the theory of excess of embryonal tissue? So, too, we may have difficiency of organs or members from lack or deficiency of embryonal tissue.

Atypical proliferation means development of tissue from an embryonal matrix embedded in mature tissue. Homologous tumors develop from matrices corresponding histologically with the mature tissue in which they lie, while the matrices of heterologous tumors do not correspond to their surrounding tissue.

With a clear understanding of these terms it is easy to appreciate the difference between a "tumor" and a "swelling." The literal meaning of tumor can be applied to it no longer. An inflammatory swelling is produced by the migration of white cells and by proliferation of pre-existing mature tissue. Its products may undergo higher transformation, they may retrograde and become absorbed, therefore such a swelling is not permanent. A tumor is proliferation not from pre-existing mature tissue, but from an embryonal matrix, and is a permanent growth, never undergoing "resolution," but tending to progressive increase. Simple adenitis causes proliferation of mature tissue cells; remove the cause and the swelling disappears, but a tumor increases in size by multiplication of the cells of the matrix. A haematoma and a hygroma are not true tumors, because composed of preformed tissue. So with retention cysts, which are simply an accumulation of pre-existing elements. Zahn and Lepolt have demonstrated, by experiment, that transplantations of mature tissue are absorbed, whereas embryonal tissue transplanted from unborn animals will grow to two hundred or three hundred times the size of the original matrix.

The histological character of a tumor depends upon the character of the matrix, and the character of the matrix depends on the time at which its development was arrested in utero. If arrested when composed of myxomatous tissue, the tumor will be myxomatous; if when embryonal cells, a sarcoma. A matrix can not be detected, but manifests itself by proliferation, or it may remain latent, and never develop unless acted upon by some exciting cause. What are these exciting causes? The malignancy of a tumor depends more on the condition of the surrounding tissue than upon the character of the matrix. A given matrix in certain surroundings may develop a benign tumor, but with different surroundings become an intensely malignant growth. Then what is it in the tissues which causes these remarkable changes? Simply a difference in "physiological resistance." Anything which will reduce the resistance of the tissues to a point below the power of the matrix, tends to favor growth. Inflammation and traumatism not only do this, but bring to the affected part an increased amount of blood, thus furnishing food to sustain the budding growth. Old persons, or those suffering from gastric derangements or great mental anxiety, have the physiological resistance of their tissues reduced below par, hence the frequent occurrence of tumors in those individuals. But simply an increased amount of blood may be all that is necessary to cause the matrix to spring into life. Look at the tumors of the ovaries and mammæ which develop during the periods of activity of these organs, and watch how rapidly they grow at such times. At the menopause tumors of the female generative organs are often arrested because of the diminished blood supply. Why do our gynecologists remove the ovaries before the climacteric period has been reached? Because they want to stop the physiological activity of these organs.

Hence it is that we should not depend upon the morphology of isolated cancer cells to arrive at the proper estimate of the malignancy of a given growth, but should consider carefully the condition of the surrounding tissues, as well as other modifying circumstances. Reasoning along this line one can understand how a benign tumor can become malignant when there is some pathological or physiological cause reducing the physiological resistance.

But in all cases allowances must be made for many malignant tumors diagnosed as benign, only one section having been made from only one part of the tumor.

But no matter how reduced the resistance of the tissues, there can be no tumor unless the matrix has been implanted during fœtal life. All tumors are therefore congenital, and many persons now have latent in their bodies, matrices which may or may not develop, according to the presence or absence of sufficient exciting causes.

The secondary growths are produced in a way different from that of the primary, blood and lymph acting as the channels by which tumor cells are transported to distant parts. It is well known that the lymphatics are closely connected with subcutaneous tissue and serous membranes. Gland after gland is invaded until the circulation is finally reached, through the lymphatic duct, when a perfect stream of death-dealing elements is thrown into the vital fluid. The growth may eat its way directly into the lumen of a vein, with the result of embolic metastasis, thus giving an explanation to the term "infection" as applied to tumors. Again cancer cells and embryonal epithelial cells possess the power of amœboid movement, enabling them to infiltrate the surrounding parts, producing the "Inflammatory Zone of Waldeyer," which, if not removed at the time of operation, acts as a starting-point for fresh mischief.

Tumors are a part of the organism ruled by the same laws as other parts of the body, and subject to the same degenerative changes, and exposed to the same liability of infection, and therefore may, and do, become diseased. But, you say, a tumor is a disease itself. Grant it: Does not every disease have its natural history tending to recovery or death? Fatty degeneration, colloid degeneration, tyrosis, gangrene, ulceration, occur in tumors just as in other parts of the body. A favorable change that may occur is an increase in the connective tissue elements which exhibit their inherent tendencies to contract, thereby shutting off the blood supply and retarding the growth of the tumor. This it is which gives the hardness to benign tumors.

This omnipresent connective tissue plays an important part in the pathology of many diseases, and is therefore an object of great interest. Should gangrene occur from absolute anæmia, due either to surgical or pathological causes, the tumor sloughs off, and, if it is not malignant, a cure may result.

If ulceration should supervene, the growth may be as certainly destroyed as by gangrene, but here it is more apt to return at the seat of the scar. The surrounding parts may even ulcerate from pressure, absorption of tumor elements result and the mischief be thereby extended. Many attempts have been made to prove that tumors are produced by microbes, but it is now conceded that the test of a microbic origin has never been fulfilled. To prove the causative relation of microbes to any given disease, the following rules must be complied with:

1. A certain microbe must be found in every case of the given disease, and only in this disease.
2. The microbe must be isolated and cultivated.
3. The disease must be caused by inoculation with the microbe.

Who has heard of a surgeon being inoculated with cancer while operating?

Finally it has been the aim of this paper to draw your attention especially to these points:

That a tumor and a swelling are two entirely different things.

That a matrix is essential to the formation of a tumor.

That the matrix may remain latent unless the physiological resistance of the tissues become less than the power of the vitality of the matrix.

That malignancy depends not only on the histological character of the matrix, but also largely upon the condition of the tissues in which the matrix is located.

That all true tumors are congenital.

That any tumor may become diseased and thereby cause recovery or death of the patient.—*St. Joseph Med. Herald.*

Urine of Business Men.

THERE is no question that too little attention is paid to urinalysis, by the majority of practicing physicans, especially the microscopic part of the work. All know how to test for albumen and sugar, but very few can make a quantitive analysis of urea, and a still smaller number have no microscope, neither do they know the most common crystals. An examination of the urine will reveal the incipiency of many diseases which can be throttled at the outset, and then the physician can exercise his prophylactic powers, the most useful part of his life-work, for it is better to prevent than to cure.

Dr. Clifford Mitchell, of Chicago, in the *Medical Era*, seems to have been especially interested in the urine of business men, and he emphasizes some important points.

The urine of the over-worked and over-fed American business man usually shows in the beginning, before any renal disease is actually present, the following characteristics:

The total quantity of urine for the twenty-four hours is greatly reduced, sometimes to half the normal quantity. The color is usually, therefore, darker than normal, and there is an abundant sediment in which urates, uric acid, and often calcium oxalate may be seen with the microscope. The urine being diminished in quantity, and the acidity relatively increased, the urates and uric acid can not be held in solution as they ought to be. Estimation of the total quantity of urea will almost invariably show this substance to be diminished to a figure considerably below normal. Perceptible traces of albumen and sugar I occasionally find in the urine of hyperactive business men, but in many cases both these constituents are as yet absent. I say "as yet," for sometimes, if all warnings are unheeded, one or the other of these unwelcome visitors, in time, may make its appearance. I regard persistent decrease in both fluids and solids of the urine of great significance in those who eat heartily and exercise little. It is not necessary that either albumen or sugar be present—there is enough trouble without them. When a man of average weight voids daily no more urea than we find in the urine of a delicate woman, or a bed-ridden patient, it is time to cry "halt." I have found that those patients with diminished urea and crystalline sediments, have all sorts of aches and pains. Headache is a very common concomitant. Sleeplessness is another. If I could have my own way, I would estimate the urea in the urine of every patient in the country suffering from insomnia, or restless, unrefreshing sleep. Professor Dowling, in his paper on Lithæmia, has commented on the same thing. Not all insomnia is due to lithæmia, but many cases, apparently hopeless, could be helped were the conditions properly understood.

The Pathogeny of Addison's Disease.

THE definition of Addison's disease is tolerably clear, but much confusion still exists in the minds of many as to the true nature and pathogenesis of the affection. As is known, it is a disease characterized primarily by a marked and constantly increasing weakness, not necessarily associated with any emaciation, pains in the epigastic and lumbar regions, sometimes shooting to contiguous parts, vomiting and other evidences of digestive disturbance, a weak and small pulse, dyspnœa, and usually, though not invariably, a bronzing of the skin and mucous membranes. Associated with these symptoms there is some lesion in one or both, almost invariably the latter, of the suprarenal bodies. The dark coloration of the skin, although the most characteristic, is not the most constant symptom of the affection. It often does not appear until the other signs of the disease have existed for quite a length of time, and in a not inconsiderable proportion of cases it is absent throughout the whole course of the disease. This is due possibly, as Jaccoud has suggested, to the fact that it is a late symptom, and thus the patient may die from asthenia before sufficient time has elapsed for the pigmentation of the skin to take place. At the autopsy, however, in these cases the adrenals are found to be diseased, so that the affection is to be characterized as true Addison's disease, despite the absence of the bronze discoloration.

In a recent lectue (*L'Union Médicale*, December 27,

1888) Professor Jaccoud recalls the views which he expressed a score of years ago, and which, with some modifications, he still holds, concerning the pathogeny of the affection. It is not, he maintains, the lesions of the suprarenal bodies *per se* upon which the complex of symptoms depends, but rather upon the secondary changes in the semilunar ganglion and solar plexus resulting from these lesions. This portion of the sympathetic system, lying between the two adrenals, is directly affected by disease of the latter. The ganglia are sometimes found to be actually diseased, but often it is only in the nerve terminations in the adrenals that lesions exist. The cardiac and respiratory symptoms, and the epigastric pain, are explained by the connection existing between the pneumogastic nerve and the abdominal sympathetic. The bronzing of the tissues is the result, the author holds, of trophic disturbances dependent upon the sympathetic lesion. The pigmentation comes from the blood, and occurs through the lesions of the adventitia of the arterioles, and even of the media as well as in the larger vessels. This explains the late appearance, or even absence, of the tegument discoloration. There is no peculiar lesion of the suprarenal bodies, Jaccoud maintains. It is usually a process resembling, if not identical, with tuberculosis, such as was described by Addison, but it may be of any other sort, even simple atrophy. The nature of the lesion is of but little moment, the essential fact being some disease of the suprarenal bodies, leading to changes in the abdominal sympathetic, with the fatally progressive symptoms depending thereon.

Addison's disease has usually been considered to be a disease of adult life, but this need not necessarily be the case. Instances have been reported in which there was discoloration of the skin in young infants, and at the autopsy the adrenals have been found to be diseased. The gross appearance was usually that of tuberculosis, though tubercules were not always found upon examination under the microscope. But, according to Jaccoud, these are cases, nevertheless, of true Addison's disease, and accepting the views above referred to, there would seem to be no reason for regarding them in any other light. In accordance with this theory, age and the nature of the lesion are unimportant, the changes in the adrenals and the symptoms resulting therefrom constituting the affection going under the name of Addison's disease.—*Medical Record.*

Fractures of the Upper Extremities.

CHRISTOPHER HEATH, University College, London, has recently delivered a lecture on the above subject, which is published in our valuable exchange, *The London Lancet.* He does not attach quite as much importance to *crepitus* as the majority of surgeons, but places the symptoms in the following order: deformity, loss of power, pain, crepitus, and states that the first three, occurring at the same time, are usually sufficient for diagnosis. His reason for putting *crepitus* last is because it can only be ascertained, by the surgeon, on manipulation, who should be sufficiently posted to make up his mind pretty nearly as to the injury without touching the limb. He insists that no attempt to obtain *crepitus* should be made when it is perfectly evident that there is a fracture.

The lecturer mentions the custom of some surgeons of applying bandages next the limb and then applying splints, but condemns it in the most emphatic terms as a dangerous procedure, liable to cause gangrene. All splints should be thoroughly padded so that the limb may swell and constriction not result. As to the character of splint used, it should be rigid in its length, but yield sufficiently to accommodate itself to the limb in the transverse direction.

There is one point mentioned that is frequently forgotten by the general practitioner. It is that the matacarpal bone of the thumb partakes of the nature of a phalanx, and therefore differs from its fellows in having the epiphysis at its proximal instead of distal end. Hence she separation of the epiphysis which frequently occurs in children will occur at the base of the thumb and not at the distal extremity. As to Colles' fracture and dislocation of the wrist in young people, the lecturer is rather skeptical, maintaining that they are in reality separation of the epiphysis of the lower end of the radius.

In the treatment of fractures of the olecranon, the author advises keeping the arm bent at right angles so that it can be carried in a sling. This is a departure from the time honored custom of dressing such fractures with the arm perfectly straight, the reasons given for the changes being the greater comfort to the patient, the fact that fibrinous union will be just as good, and the advantage of having the arm in this position should ankylosis occur. When the elbow joint is involved, from fracture of the lower end of the humerus, he says, "The great point in a fracture low down, no doubt, is in the first place, if possible, to make an accurate diagnosis (which is not always possible), and at all events to treat the case in such a way that no harm may result. I say that particularly, because I am sure that sometimes harm does result from treatment. I believe in all cases of fracture of the lower end of the humerus, the arm should be well bent. * * * If there should be any stiffness, as there is likely to be, still I believe on the whole it is the best position for the patient. Then a word as to the length of time that you should keep up fractures, and what you should do with them afterward. It is not sufficient to get fractures united; you must get the patient's limb into a good state. It is a mistake to lose sight of a patient, and only to tell him to go about using his arm until it has got all right. If you want to take care of your own reputation, do not dismiss a case of fracture until the patient has complete use of his limb."—*St. Joseph Medical Herald.*

Obstetrical Society of Philadelphia.

THEOPHILUS PARVIN, M.D., IN THE CHAIR.

Stated Meeting, Thursday, February 7, 1889.

A YEAR'S WORK IN A MATERNITY HOSPITAL.

In making this report I desire briefly to call attention to the amount of work done, the routine treatment of patients, and a few alterations which have taken place in the building. During the year 1888 there were 184 deliveries in the Retreat. Of these patients 69 were primiparas. There were 186 children born, including two sets of twins; 9 of these infants were stillborn, 102 were males, 84 were females. There were 13 forceps deliveries. Labor was induced in 2 cases in the eighth month—in 1 case a contracted pelvis and in one the presence of a large uterine tumor. There have been no deaths of mothers in the Retreat for a period of nearly five years, furnishing a series of 540 deliveries without a death, the last death being from puerperal convulsions in a patient suffering from chronic Bright's disease, and who had had convulsions in five previous labors. Since this death there has not been a case of puerperal septicæmia in the institution. The great success attending the work of this Maternity is due to the strict enforcement of the law of cleanliness. Everything and everybody in the house is clean and jealously kept so. This system was enforced by Dr. Goodell, and has been carried out on the lines laid down by him. The routine treatment of patients is as follows: the patient on entering the house is given a hot soap bath, dressed in clean underclothing, and given a clean bed in the waiting ward. If necessary, a laxative is given and the bowels kept soluble during her waiting period. Thereafter, until her confinement, she is obliged to take at least two hot soap baths per week and to wear clean clothes. She is allowed to do such light work about the house as the physician may deem advisable, and is encouraged to take as much open-air exercise as circumstances will permit. Every effort is made by the officers and employes of the institution to make it as cheerful and homelike as possible. When ready for the delivery room the patient is again given a hot soap bath and an anæma and a vaginal injection of 1 to 2000 bichloride of mercury solution. She is clothed in a clean night-robe and drawers and placed upon a new, clean delivery bed. Scrupulous cleanliness is observed in all manipulations of the patient, and after delivery a second vaginal injection is given, and a vaginal suppository of iodoform is introduced. The patient's person is carefully cleaned and all soiled clothing removed, the binder applied, a clean set of night clothes put on, and the patient placed in a new, clean bed in the ward. All of the soiled articles are immediately removed from the delivery room and a new bed made up for the next patient. The patients in the ward are carefully observed by the nurses, but no unnecessary handling or interference indulged in. The patients remain in the ward until they are able to be up, when they are removed to the convalescent ward. As the ward is emptied, the beds are burned and all the bedding most carefully cleansed. No soiled linen (as draw-sheets, diapers, napkins or other articles of clothing) is allowed to remain in the ward, but when soiled is immediately placed in a covered receptacle and removed from the ward and building. No sponges, wash-rags or absorbent cotton are used in the house. Corrosive jute supplies the place of these articles, being clean, soft, remarkably absorbent and cheap;

it is destroyed immediately after use. The pads used to absorb the lochia are also composed of jute and are likewise destroyed after use. The beds in the wards are of new straw. All discharges from the delivery room are immediately burned. All bedding soiled beyond cleansing or contaminated by purulent or specific discharges is likewise burned. In short, every effort is made to keep the house perfectly pure and sweet. The arrangement of the house permits of rotation in the use of the wards, so that a ward, once emptied, is not again used until three others have been filled. In the meantime it is most carefully and scrupulously cleaned and thrown open to the atmosphere. A similar system is pursued in the convalescent wards and delivery room. A few alterations in the building have very markedly increased the effectiveness of the institution and the comfort of its inmates. In the first place, the bathroom and water-closets have been removed from the building proper and placed in the towers in the rear. The plumbing is as near perfect as modern sanitary science can make it. The verandas have been enclosed in glass, forming large, light, airy corridors about the rear of the building, and furnishing a distinct circulating atmosphere between the house proper and the wards and the water-closets. The ventilation of the entire building is simply perfect. The capacity of the house at present is about fifty patients per month, and, when a few contemplated changes are made, the capacity will be doubled and the institution rendered as nearly an ideal maternity hospital as is practicable.

Dr. William Goodell said it had always been a matter of great regret to him that he did not adopt this system a year or a year and a half before he did. He supposed it was partly due to the conservatism of old age and partly to a series of some forty deaths from bichl. poisoning he had collected. Tarnier's report of the results following the use of this agent so impressed him, that he was led to make the change. Before he adopted the system which had just been detailed by Dr. Price, he had once as many as five deaths in about 150 cases, four of these due to septicæmia. Latterly hardly a year would elapse without the occurrence of one or two deaths. When he first started everything about the institution was new and clean, and for several years he had the best record of any maternity hospital in the world. After the building and articles had become old, deaths began to occur. He tried carbolic acid, but it proved of little value. After beginning the use of corrosive sublimate injections, iodoform suppositories and antiseptic pads, he did not have a death from septicæmia. The only death was one from Bright's disease of the kidneys. During this time he had been consulted perhaps a dozen times in the course of a year to see women dying from puerperal septicæmia. He thought that, in private practice, it would not be needful to follow out so strictly the details of the method as it is practiced at the Preston Retreat. For instance, the antiseptic pad and the iodoform suppositories might be done away with. He believed, however, that every practitioner should syringe out the vagina both before the birth of the child and after complete delivery, with a bichloride solution of 1-2,000. The hands should also be disinfected. He was called in consultation by a physician in the country who had had four or five deaths from sepsis in a short time. He found he had been treating a case of phlegmonous erysipelas. He knew of another physician who had lost, he thought, seven cases —certainly five, from dressing a sloughing case of erysipelas. Antiseptic measures would probably have saved all these cases.

Dr. Henry Leaman would call the attention of those who have the opportunity of observing the physiological processes of labor to one point, viz.: presentation. It is very difficult to accurately determine the presentation, particularly of the face, brow, and posterior presentations. These observations should be verified by examination of the abdomen previous to labor and the location of the fœtal heart sounds. They should also be confirmed by observation of the position of the head in the act of delivery. A mistake is readily made in posterior presentation. Posterior presentations are, he thinks, more common than we are in the habit of considering them. His object in speaking was to say that every case of labor was a case for the minutest observation. There was another point which he thought should be observed, that was the hour of the day at which labor occurs. There is, he thought, probably some connection between arterial pressure and the time of delivery. In recording the hour there would be an allowance to be observed in cases where the forceps were used. There was another point not mentioned, and that was the position of the succedaneum and its extent. These have to do with the natural process of labor and aid in determining the presentation.

Dr. J. Price said he was as anxious about a labor as he was about a section, when he read reports of maternity hospitals with a mortality of from 2 to 27 per cent. This troubled him not a little now that he controlled a large maternity hospital, one in which Dr. Goodell had left a record of 275 cases without a death. He sees a labor case as frequently as he does a drainage after abdominal section. When this hospital was new, Dr. Goodell had a run of 250 cases without a death from any cause. This was the longest run of any institution at that time. After this deaths began to occur. Later he adopted the gospel of cleanliness, and with what results he has just told you; the results are now precisely the same as he left them. In regard to Dr. Hirst's question as to whether the same results might not be obtained by simpler methods, Dr. Price said that they did not differ much in regard to the use of solutions and that part of the treatment. The toilet of the house was perhaps just as systematically carried out at the Philadelphia Hospital as at other institutions. The pad which he had shown would hold a pint of fluid. It saved an immense amount of laundry work. It was now coming into use as a menstrual pad, and was very convenient for ladies traveling. In private practice the mortality was greater among the rich than the poor. Among the poor he had had 700 deliveries without a death. He thought the difference was in the water-closets which the better classes had in their houses. The mortality throughout the country was large. In a small town in Ohio, with a high elevation and beautifully located, he had recently known of two deaths from septicæmia. Last summer he had been called to see puerperal cases nine times, and all died.

Selections.

The Cure for Bacillary Phthisis.

The *Med. News* has the following from the *Internat. Klein. Rundschau*, by Louis Weigert:

Two years ago I recommended a work concerning the therapy of diseases of bacterial origin. For reasons which

I can not now particularly enumerate I discontinued it in order that I might restrict my attention to a part of the work, viz.: the tuberculosis. Theoretically I made the following deductions:

All attempts hitherto made to destroy the tubercle-bacilli in a body infected by them failed, for the reason that they possess a greater power of resistance against anti-parasitic agencies, than do the cells of the animal organism themselves.

Just as resistant as the tubercle-bacilli are against such remedies, just so susceptible are they to the influence of temperatures, be they either higher or lower than their optimum temperature.

All varieties of microbes, as was first proven by Pasteur, by reducing the virulence of the bacillus of chicken cholera, and as taught later by Toussaint and Pasteur by their protective anthrax inoculation, are thus reduced by the action of increased temperatures.

The temperature limits within which the tubercle bacilli can flourish are particularly narrow. Were it possible now, by means of a discontinuous sterilized process, to hinder the tubercle-bacilli in their development and thus to diminish their virulence, and were it possible for the human organism to bear the inhalation of highly heated air without detriment, then we would have obtained a means in such inhalations of combating bacillary phthisis.

Thus reasoning, I instituted experiments in various directions, with the following results:

1. The correctness of the announcements made by other investigators concerning the temperature limits, and the effects of various degrees of temperature upon the tubercle-bacilli.

2. The possibility of lowering their developmental and procreating capacity by means of discontinuous sterilization.

3. That dry air heated to 150°—180° C. (302°—356° F.) may be inhaled by man without difficulty for several hours, and that such inhalations produce a hurrying of the pulse only during the first few minutes; a diminution in the frequency of respiration, with at the same time a deepening of the inspirations; an elevation of the general temperature of the body by ½°—1° C.; the expired air shows a temperature of at least 45° C.; within an hour after completing an inhalation the temperature of the body returns to normal, and the general well-being remains undisturbed.

My experiments thus far instituted for determining the temperature of the air contained in the alveoli, and that of the tissues during an inhalation, have thus far not maintained any positive result.

I commenced a series of experiments, with the purpose of determining whether, and in which stage of the treatment, the virulence of the tubercle-bacilli contained in the sputa of consumptives, was, through such inhalations, diminished and thus removed, simultaneously with the reception of a tuberculous patient for treatment by means of highly heated dry air.

I began treating the first patient June 7, 1888. Since then I have treated a very large number of consumptives after the same manner, and moreover, almost throughout with such favorable results, that, indeed, every doubt as to correctness of my premises must be excluded. I intend shortly to have appear in print the clinical history of my first fifty cases, and thus place them at the disposal of my colleagues. Meanwhile I shall limit myself to a representation, seriatim, of the general results attained:

1. Removal of dyspnea.
2. Lessening of cough.
3. During the first few days, especially while inhaling, increased expectoration; later on a considerable diminution, up to its complete disappearance.
4. Cessation of the fever.
5. Removal of night-sweats.
6. Improvement of appetite.
7. Increase of strength.
8. In a short time, in most cases, a complete stand-still of the acute process.
9. Less frequent occurrence, and later on entire freedom from hemoptysis.
10. Removal of catarrhal phenomena.
11. Clearing up of previous infiltrated parts.
12. Disappearance of bronchiectases.
13. Cicatrization of cavities.
14. An increase in weight takes place, particularly in such cases as previously had been much emaciated, and also in such in whom has occurred not only a stand-still of the acute process, but already a beginning of the healing process. The absence of increase in weight at first is, however, easily explainable, when it is considered that patients treated according to my method are not sub-

jected to any extra diet whatever, and that the inhalations require more or less bodily exertion.

15. Microscopic examinations show a gradual decrease of the elastic fibers in the sputa up to a total disappearance of the same, as also a rapid diminution of the pus corpuscles. During the early period of the inhalations, it seems to me that there occurs an increase of the bacilli in the expectoration; but later on there is shown a considerable diminution of the same.

That a cure can only be a gradual process can easily be understood from all that has now been said. An immediate killing of the bacilli, by means of hot air inhalations only from time to time, can not be made possible, but simply their discontinuous sterilization. The inhalations continue but for a few hours daily; only during this time are the bacilli exposed to weakening temperature, and after all, this is not as high as would appear. For though the inhaled air at the mouth is at a temperature of 160° C. (320° F.), it cools considerably on its way to the lung by being in contact with tissues and the blood circulating therein, of a temperatnre of only 37.50 C. (112° F.). Now, inasmuch as this again must have become still further cooled on its return passage from the lungs, we may infer that the air contained in the pulmonary passages during an inhalation must be at a temperature many degrees higher than 45° C.

The experience thus far gained enables me to give the following definite directions:

1. The effort must be made to increase the duration of the inhalations as rapidly as possible, beginning with half an hour twice daily, up to two hours or more, twice a day. The more or less rapid lengthening of the sittings, as also the eventual shortening of the same, must be adadted by the observant physician to the individual condition of the patient. Never must the inhalations last longer than is comfortable and agreeable to the patient.

2. The patient must be encouraged to make the deepest possible, and later on, forced inspirations.

3. The temperature of the air during these inhalations, as indicated of course by the thermometer in the breathing tube, beginning with 100°, must as rapidly as possible be raised to about 250° C., which can be accomplished within two or three days without complaint on the part of the patient. The air on its way from the thermometer to the

mouth is considerably cooled, and as the valves do not shut perfectly, outer air at 250° (thermometer) amounts in reality to only about 150°.

4. Should pulmonary hemorrhage (hemoptysis) occur, the inhalations must be suspended.
5. With hemoptysis the inhalations are to be continued, with the direction, however, that the inspirations must be as shallow as possible.
6. With acute pleuritic inflammation, rule 5 is to be observed, excepting when very severe, then rule 4.
7. After having finished a sitting, the patient must keep the room for at least half an hour; then only may he be allowed, and even encouraged—only however in favorable weather—to exercise in open air.

As a matter of course the treatment by means of hot air inhalations permits the fulfilling of any other therapeutical indication that may appear necessary, more especially the administration of antipyretics, etc.; contra-indications, I know of none.—*Weekly Medical Review.*

A Medico-Legal Case in Which the Needle of an Aspirator Was Plunged Past the Right Pleural Cavity Through the Diaphragm, and Into the Liver, With Fatal Effect.

BY J. M. BALL, JR., M.D., WATERLOO, IOWA.

CASES of alleged malpractice, in which an aspirator is the instrument producing death, are very rare; so rare, in fact, that after a prolonged search the writer has been unable to find a single recorded instance. A case which merits the title of this paper has just been tried a second time in the district court, convened in this city, and has attracted great attention in local medical circles. The first trial was had in February, 1886, and in each instance a verdict was returned in favor of the plaintiff. The present paper is written with an honest desire to benefit the profession and to sound a note of warning in regard to an operation which so many of the faculty are called upon to perform, and in which the possibility of producing harm seems rarely to have entered the operator's mind. The petition of plaintiff sets forth that the defendant is a practicing physician in Waterloo, Iowa; that said A. R., in April, 1885, being in feeble health reason of malarial poisoning, employed the defendant in his professional capacity; and that the defendant accepted such employment, thereby tacitly agreeing to bring to the treatment and relief of the deceased a reasonable amount of professional skill.

The plaintiff further alleges that the defendant made an incorrect diagnosis of the case; and decided "that it was necessary and requisite to the treatment of said R. that a certain surgical instrument known as an aspirator should be inserted into the body of said R. And plaintiff alleges that the use of said instrument was unnecessary and without reasonable excuse. That, therefore, and in pursuance with his determination, the defendant proceeded and did insert into the body of the said R. the instrument aforesaid. That said instrument was by the defendant ignorantly, unskillfully, carelessly, and negligently inserted and used; the liver, diaphragm, and peritoneum of said R. thereby wounded and cut; great pain and suffering inflicted upon said R., and that therefrom said R. did thereafter, and on or about April 28, 1885, die." Damages were asked in the sum of five thousand dollars.

In his answer to the petition of the plaintiff, the defendant "denies that the use of the aspirator by himself in making a diagnosis of the disease of which the said R. was ill, was wrongful, or without warrant or excuse therefor.

"That, as to whether said instrument caused great pain and suffering of the said R.; as to whether the liver, diaphragm and peritoneum were punctured or cut by said aspirator, the defendant has not sufficient information to form a belief as to the truth thereof, and asks that such allegations be taken as denied."

The undisputed testimony shows that A. R., a farmer by occupation, æt. 38 years, was a strong, robust and healthy man on December 24, 1884, at which time he started on a journey to visit friends in New York; that he was absent about ten weeks, and that while absent he contracted a severe cold which settled on his lungs. In March, 1885, he consulted a physician, who told him that he was suffering from malarial poisoning. Dr. —— was first called to attend the deceased on April 20, 1885. He found marked dullness over the right side of the chest, extending downward from a line drawn horizontally across the right side, and about one inch above the nipple. The doctor expressed the opinion that his patient was suffering from pleurisy. Some remedies were prescribed, and the defendant returned home. This was on Monday. On the following Thursday the doctor returned with an aspirator, and proposed to aspirate the right pleural cavity for diagnostic purposes. This was consented to by the patient. The doctor did not have counsel, and the persons who assisted in the operation were laymen. The aspirator was used, but no fluid was found. Immediately thereafter his breathing became more rapid and difficult, and great pain, which was paroxysmal and frequently recurring, was complained of in the right hypochondriac region. In twenty-four hours he was delirious, and his abdomen tympanic and swollen. At 4 A.M. of the following Tuesday the patient died. The needle of the aspirator used was found on measurement to be one millimetre in width, and one-eighth inch in length, from the eye to the shoulder.

The post-mortem examination showed that the thoracic organs were normal, except the lower lobe of the right lung, which was the seat of the hepatization. The abdomen was tympanic, and showed evidences of diffuse general peritonitis. The superior surface of the right lobe of the liver presented a wound about one and one-eighth inch in length, and varying from one-eighth to three-sixteenths of an inch in depth. Between the superior surface of the liver and the under surface of the diaphragm, and adherent by plastic exudation to the latter, were several flattened clots of blood each about the size of a half dollar. The diaphragm, at a point corresponding to the wound in the liver, presented evidence of an intense inflammation.

The conflicting testimony is in regard (1) to the seat of puncture of the chest-wall, and (2) to the depth to which the needle was introduced.

1. The defendant swore that he inserted the needle at the sixth intercostal space, on the right axillary line. A gentleman present swore the "puncture was about two inches below and a little to the right of the right nipple."

2. The defendant stated under oath that he first introduced the needle about an inch, and turned the stop-cock of the aspirator; then, obtaining no fluid, he pushed the needle about half an inch further with a similar result. The testimony of the spectators leaves it doubtful as to the depth to which the needle was inserted.

Verdict.—At the first trial the Court instructed the jury that, inasmuch as the plaintiff had introduced no testimony to show the value of the deceased's life, damages if found at all, could be merely nominal, such as six cents on the dollar. Jury found for plaintiff in the sum of a dollar. Verdict was set aside by the Court as unwarranted by the evidence. At the second trial the jury found for the plaintiff in the sum of fifty dollars.

Remarks.—The operation of thoracentesis is of great antiquity, being mentioned in the writings of Hippocrates, Galen, Paulus, Ægenetæ and Celsus. It was performed by them for the relief of empyema, but the operation as applied to cases of hydrothorax was not performed previous to the first part of the seventeenth century.

Among the important questions bearing upon the preceding case, and on which experts were requested to enlighten the jury, are the following. They are appended for the benefit of the reader, and may furnish food for thought.

I. "Do you know of any cases on record in the medical text-books where the surgeon, in attempting to remove an effusion from the pleural cavity, has plunged his instrument through the diaphragm, into the liver, with fatal effect?"

Answer.—Donaldson, in "American System of Medicine," vol. iii., p. 533: "Aran plunged a trocar into the liver when operating through the same point," viz., the seventh intercostal space. Aitken, "Science and Practice of Medicine," vol. ii., pp. 673 and 674, edition of 1866, says: "The most appropriate spot of puncture is between the seventh and eighth, or eighth and ninth, or ninth and tenth ribs, in a line let fall from the lower angle of the scapula; but as a rule, let the trocar be introduced as low down as possible consistent with the safety of important organs in the chest or abdomen. The exact position of the liver and spleen must be determined first in every instance. Lænnec himself once transfixed the diaphragm and pierced the liver, and that through the fifth intercostal space. An enlarged liver or spleen may be detected as high as the fifth rib. Dr. Watson once witnessed an operation in which the trocar was pushed through the diaphragm into the spleen, which was unusually large. The patient died a day or two later of peritonitis." * * * "The point of the instrument should be raised rather than depressed, so as to avoid injury to the diaphragm, liver or spleen."

II. "Supposing a needle three inches long be inserted into the sixth intercostal space, over the right side and on the axillary line, and at a right angle to the chest wall, what important organ would such a needle pass through or injure, assuming the parts to be in their normal position?"

III. "Would it be possible in your opinion to produce a wound, one inch in length and one-eighth of an inch deep, by means of the needle of an aspirator introduced at right angles to the body, for a distance of three inches, into the seventh intercostal space on the right side, assuming the organs to be in their normal position?"

IV. "What is the distance from the sixth intercostal space on the mid-axillary line of the right side to the nearest point of the liver, assuming the parts to be in their normal position?"

V. "Assuming the needle of an aspirator to be inserted at the sixth intercostal space of the right side, passing through both layers of the pleura, through the diaphragm, and through both layers of the peritoneum, would it be possible to produce, in the convex surface of the liver, a wound one inch in length and one-eighth of an inch in depth?"—*Med. Rec.*

Cæsarean Section.—University Hospital.

BY PROFESSOR WILLIAM GOODELL.

At the clinic of Professor William Goodell, held at the University Hospital on Wednesday, 13th inst., the highly interesting operation of Cæsarean section upon a woman, the victim of carcinoma of the cervix, was performed before a large class of students and members of the profession. Professor Goodell, before presenting the patient, stated she was thirty-two years old, and had given birth to eight children.

The first intimation of the presence of the malignant growth manifested was hæmorrhage from the uterus, which appeared about a year previous, when on examination the true condition of her ailment was revealed. She was admitted to the hospital last October, when the cancerous mass was curetted and thoroughly cauterized by Paquelin's cautery. About two weeks after this operation, the patient declared she had felt distinct fœtal movements within her abdomen, which was the first knowledge she had that she was pregnant. As the cancerous tumor had progressed to such an extent as to completely block up the cervix, Professor Goodell thought it would be impossible to extract a living child per vaginum, or deliver the woman without danger to her life. At this date, through reckoning of the fœtal movements, the pregnancy lacked from one to two weeks of full time. Consequently he brought the patient before the class to deliver her by the new Cæsarean section. The patient was then etherized and placed in the dorso-recumbent position. The abdomen was thoroughly scrubbed, and under every antiseptic precaution an incision was made in the median line, extending above and below the umbilicus. A corresponding opening was then made in the womb, which was opened in situ and the fœtus revealed, with the left sacro-anterior presentation, which position had been diagnosed, and demonstrated to the ward classes by Professor Goodell. The child was next delivered through the wound.

Although vigorous, it was smaller than the average size, and had evidently not reached full term. The uterus was then brought through the abdominal wound, and all hemorrhage arrested by an elastic tube passed around the cervix. The uterus and abdominal cavity were then thoroughly cleansed with hot water, and in the former were placed sixteen deep and as many superficial sutures. The external wound was then closed, and dusted over with iodoform, over which was placed iodoform gauze, cotton, and a bandage. No drainage was provided for, as it was not thought necessary. Very little blood was lost; the patient bore the operation well. The time occupied in delivering the child was three minutes, the remainder of the hour being occupied in closing the wound.

Professor Goodell stated the after-treatment would be the same as in all cases of laparotomy. Nothing would be administered by the mouth during the first twenty-four hours. If it were deemed necessary to give nourishment, nutrient enemata would be resorted to. Opium would be avoided as much as possible. If fever, tympanites, or any outward symptoms presented, saline cathartics would be administered. Professor Goodell stated he was wholly indebted to Dr. R. P. Harris, who had honored him with his presence at the operation, for the statistics he presented. One hundred and fifty-nine operations are on record as having been performed all over the world; of these forty-five terminated fatally. Twenty-five of these operations were done in this country, with fifteen deaths.—*Med. Times.*

Gleanings.

Dermatitis of Eyelids due to Arnica.—We have had occasion to call attention to the fact that tincture of arnica, far from being the soothing agent it is looked upon, is often a violent irritant. Dr. J. M. Crawford recently reported to the Atlanta Society of Medicine (*Atlanta Medical and Surgical Journal*), a case of a man of 50, who, while drinking, fell and injured his face and eyelids, breaking the skin. He applied the tincture of arnica for a half hour. Two days later the lids were so thickened that the eyeballs could not be viewed. Two days after, sloughing of the whole integument, from eye-brows to tarsal cartilages of both lids took place; and, in one eye, there was extensive effusion and detachment of the retina.

Idiopathic Epilepsy.—Wood, at a recent clinic, presented a boy, aged 13, who gave a history of epileptic attacks at irregular but frequent intervals since May last. The attacks were attended with loss of consciousness, but not preceded by warning or aura of any kind. The patient stated that, when 8 years of age, he received a blow on the back of the head from a snowball containing a lump of coal, and since that time he suffered from persistent occipital headache until the epileptic attacks commenced, when the headache ceased. Examination of the head failed to show the existence of any scar or depression, while the vision was perfectly normal as to its field. Wood said the question to be considered was, Was this a case of idiopathic or traumatic epilepsy? He was strongly inclined to believe the disease idiopathic epilepsy, as the attacks had no connection with the injury, and they commenced about the time that idiopathic epilepsy developed itself. Unless a careful study of the nature of the attacks was made, it might easily be mistaken for a case of traumatic epilepsy. He proposed to put the boy on a course of bromides.

Lesion of the Brachial Plexus during Parturition Causing Complete Paralysis.—Wood next exhibited a colored infant, a month old, who had complete motor and sensory paralysis of the left arm. The child was born after a tedious labor, the breech presenting, and great difficulty being experienced in delivery of the left arm, which was locked above the head. Wood mentioned that the only other lesion that could possibly cause the phenomena presented in this case, would be clot in the *locus niger*, where the motor and sensory tracts crossed, but then, he added, such a lesion would also cause paralysis of the leg of the same side. He concluded that the case was one of severe injury (probably rupture) of the brachial plexus, from culpable negligence in the delivery of the child. Nothing could be suggested except amputation at the shoulder joint, as the limb if left on would be sure to waste.

THE TREATMENT OF SPINAL CURVATURE.—Agnew, in discussing the treatment of spinal curvature, said: "Massage will be found beneficial in the early stages of lateral curvature from muscular disability. It is best applied before the patient goes to bed, so that a period of rest may succeed the fatigue consequent on the muscular exercise. As a substitute for massage I frequently use rubber 'muscle beaters' in the form of balls, or cylinders. A form of drill is also of service, the patient being instructed to walk up and down a room with something balanced on the head. Muscles which have been beaten or exercised in this way, should not be overtaxed by the patient maintaining an erect position. Complete rest should be insisted on. Extension by means of the chin strap and tripod should be employed three or four times each day, each seance lasting a few minutes. Strict attention should be paid to generate hygienic treatment. As the patients are generally anæmic, or rickety, they should have plenty of fresh air, good milk, cod-liver oil and iodide of iron. In a large number of cases when seen in the earliest stage nothing further is necessary, but when the disease is of long standing and the curve pronounced, a mechanical apparatus is necessary. The best is a plaster-of-Paris jacket, carefully applied and made to lace. It should be put on before the patient rises, and not removed at night until he resumes the recumbent position."

CARDIAC FAILURE IN DIPHTHERIA.—At the meeting of the New York Academy of Medicine on November 1st, Dr. J. Lewis Smith read a paper on Sudden Heart Failure in Diphtheria; its Pathology and Treatment. After discussing the various hypotheses advanced to explain this occurrence, such as degeneration of the muscular wall and cardiac thrombosis, Dr. Smith inclined to adopt the theory of deficient intervation, making it indeed a form of diphtheritic paralysis; the frequent association with vomiting and dyspnœa suggesting that the pneumogastric is the nerve implicated. The modern view of diphtheria is, he said, that the systemic infection is due to ptomaines produced on the surface by the microbes that are the cause of the disease; and on this view the neuritis, myelitis, etc., are produced by the same toxic influence. Dr. Loomis believed that heart failure early in the course of the disease was due to the systemic poisoning, and that when heart failure occurred in advanced stages of diphtheria, it was due to peripheral neuritis. Dr. Beverly Robinson contended in favor of the cardiac failure being due to thrombosis and granulo-fatty degeneration of the walls of the heart. All the speakers agreed as to the paramount importance of disturbing the patient as little as possible. The President, Dr. A. Jacobi, pointed out that paralysis of the muscles of respiration might occasionally be mistaken for cardiac failure in the later stages of diphtheria. He said that alcohol was an invaluable agent in diphtheria, and if he were limited to one remedy he would select it.

ON THE USE OF CREOLIN IN EYE DISEASE.—Dr. Richard Grünhut, in the *Prag. Medical Wochensch.*, reports that after a long trial with creolin in one per cent. emulsion and in one per cent. ointment of vaseline, for the different affections of the lid, conjunctivæ, cornea and lachrymal apparatus, he concluded that this remedy does not deserve the reputation that has been given to it, and in the treatment of these diseases is not to replace the other well-known disinfectants and astringents. An important objection to the use of creolin is the great pain and burning it creates, which last for some time after it has been put into the eye. Really it is so painful that it is difficult to get patients to permit a second use of it without the previous instillation of cocaine. As iritis is a dangerous complication in all sorts of keratitis, creolin is contra-indicated on account of the severe irritation it creates. He found creolin ointment did very well in cases of blepharitis where there was great excoriation with secretions, on account of its astringent properties, as well as antiseptic qualities, but still he says that it is no better than the Pagenstecher ointment of yellow oxide of mercury. In simple catarrhal conjunctivitis he did not find it as serviceable as the nitrate of silver solutions. He thinks that creolin plays but a very low role in the treatment of diseases of the eye. —*Deutsche Medizinal Zeitung.*

TRACHEOTOMY IN DIPHTHERIA.—During the discussion of an interesting paper upon this subject by Dr. J. D. Rushmore, at a meeting of the New York Surgical Society, Dr. W. Meyer, of that city, highly recommended instillations into the canula of warm boro-salicylic solution, or solution of salicylic acid alone, as a local antiseptic,—a procedure strongly advocated by Trendelenburg several years ago. Five or ten drops were applied at a time with a medicine dropper, beginning immediately after the introduction of the canula, and repeating the instillation every ten or fifteen minutes. Aside from the antiseptic action, they irritated the mucous membrane and produced violent coughing, so that mucus and strips of membrane were expelled. Besides this, the viscid mucus could not dry so readily at the lower end of the canula and thus cause a mechanical obstruction. Dr. Meyer thought that he was not mistaken in stating that he had seen between twenty-five and thirty of the patients who had been operated upon recover under this method of treatment.—*New York Medical Journal.*

HOW TO MAKE ANTISEPTIC GAUZE.—In a paper on Antiseptics (*Medical News*) Dr. R. F. Weir gives the following formulæ:

The formula for making the sublimate gauze is this: One part of sublimate and two parts of common salt are dissolved in five hundred parts of water; the gauze is soaked in this for an hour, wrung out, and partially dried in a clean room. That is to say, it should not be made or handled in a hospital ward or sick-room, and it should be kept in a moist condition in glass jars. The chloride of sodium is intended to prevent the conversion of the sublimate into calomel. Chloride of ammonium will also accomplish this. A small quantity of glycerine is of service in like manner, especially when the gauze is likely to be kept some little time. Here, however, gauze is used so rapidly that this precaution is not followed. This gauze has been made of this increased strength by experience which is supported by the recent test of Schlange, to be presented in a few moments.

For making iodoform gauze I find the following gives the best results, and it can be made very rapidly, as you will see, for the nurse will make some while I describe the process: 3 drachms of powdered iodoform are mixed up with 6 ounces of ordinary Castile soapsuds, using 1 to 5000 solution instead of ordinary water; this makes a temporary emulsion, which is poured over 3 parts by weight of absorbent gauze, which is equal to 2½ yards, and evenly distributed through it by a short rubbing process. This will make a 10 per cent. gauze, and the soap will hold the iodoform satisfactorily in the meshes of the gauze. For a 25 per cent. gauze the iodoform needs to be increased to 7 drachms, the other proportions remaining the same.

When we wish to use iodoform in deep cavities, where frequent redressing is not desirable, as, for instance, after extirpation of the rectum or of the tongue, an iodoform gauze of a more adherent nature is often employed. This is prepared by pouring over 5 yards of absorbent gauze a mixture of

Iodoform	℥iiss.
Resin	℥iss.
Alcohol	℥iv.
Glycerine	ʒvj.

Acute Pancreatitus. — Dr. Reginald H. Fitz lately delivered an interesting lecture upon the above subject, and his conclusions are as follows, he believing that the evidence he has presented is intended to establish the fact that: Acute inflammation of the pancreas is both a well-characterized disease, and one which is much more frequent than is generally thought. It is of great consequence that it should be recognized, for the following reasons. It represents a serious complication of what, by itself, is a relatively simple affection, viz.: gastroduodenitis. It is an important cause of peritonitis, and one readily overlooked. It has been repeatedly confounded with acute intestinal obstruction, and has thus led, in several instances, to an ineffective laparotomy; an operation which, in the early stages of this disease, is extremely hazardous.

Effects of Obesity on the Genital Functions.—Polysarcia brings on, according to Dr. Fournel (*Gazette des Hôpitaux*), sterility through the medium of the languor of the ovarian functions; abortion, through asphyxiation of the fœtus; contractions produced by an excess of carbonic acid; utero-placental hemorrhages consequent upon obesity of the heart; labor is rendered difficult by opposing to a feeble impulse an exaggerated resistance; it is rendered dangerous, as it may produce hernias, even death, if the heart is fatty. Finally, it is an obstacle to nursing.

MAGGOTS IN THE UTERUS.—Dr. J. F. Haines reports the following interesting case in the *London Lancet:* Some months ago I was called to see Mrs. P—, who stated that she had had "a miscarriage" three days previously, and was now suffering considerable pain. There was an intensely fetid discharge, and, on making an examination, I was surprised to find a number of maggots in the vagina. I injected a solution of carbolic acid, which, however, had but little effect, only a few maggots coming away with the return of the fluid. I then used as an injection a solution of perchloride of mercury, which killed and brought away a very large quantity of them. The patient now expressed herself as considerably relieved, and, there being no urgent symptoms, I prescribed a mixture containing a tincture of opium and liquid extract of ergot. Next day I repeated the injection of the perchloride, and on the following day a mass about the size of a small orange was expelled, which was riddled with holes, and contained a number of dead maggots. I was unable to satisfy myself as to whether it contained any fœtal structure or not. After this the patient steadily improved, and made a good recovery.

STRYCHNINE IN DIABETES MELLITUS.—In the St. Petersburg Monthly *Meditzinskia Pribarleriia R'Morskomü Sbornikü* ("Medical Supplements to the Marine Review," published by the Russian Admiralty), May, 1888, p. 398, Dr. O. V. Korjenevsky, of Astrakhan, details a remarkable case of diabetes (of obscure origin, in a strongly built naval officer) cured by the internal use of strychnine in ascending doses, from $\frac{1}{60}$ to $\frac{1}{10}$ of a grain a day. The amount of sugar had already fallen at the end of a month and decreased steadily during three more months, when not a trace of glucose could be found in the patient's urine. During the treatment, the gentleman was allowed to eat anything except sugar and jams. When examined about a year after his recovery, the patient was quite well and his urine quite free from sugar. Strychnine was resorted to after the ordinary anti-diabetic therapeutic methods had failed. It was thought by Dr. Korjenevsky to be indicated as a drug which is capable of stimulating innervation and augmenting the blood pressure, diabetes being a disturbance of the general systemic metabolism, dependent upon some failure of innervation with lowered arterial tension. —*St. Joseph Med. and Surg. Jour.*

A RARE CASE OF MIDWIFERY.—The case was a foot presentation when seen by Mr. Pedro L. de Montbrun, (*London Lancet*). A loop of the cord, cold and flaccid, also presented. Labor progressed satisfactorily until the body, as far as the umbilicus, when born. Then it became necessary to bring down the arms, which were extended above the child's head. A delay in the birth of the head occurred next, it being due to the fact that the chin was extended and hitching against the pubes. After the failure of several manœuvres, the left hand was introduced along the concavity of the sacrum, and the occiput being grasped, its delivery was assisted by traction in a downward and forward direction. The occiput swept over the perineum and was born first, and the face quickly followed. The placenta was expelled immediately afterward. The uterus contracted firmly and all went well with the patient. The case is classified by the reporter as one of placenta prævia with pelvic presentation.

INSOMNIA.—In spite of all the criticisms to which the modern art of medicine is so frequently subjected by our literary friends, few pictures indicate a fuller grasp of the requirements of medicinal treatment than that given by our great dramatist. The aim of modern therapeutics is directed more and more to the employment of measures by which a return to the normal state can be attained, when in presence of disease nothing better can be desired than the elimination of all those abnormal features by which the sick person differs from his original healthy condition. The revival at the Lyceum serves to recall that Macbeth's contemptuous "Throw physic to the dogs" really forms one long exposition of the limitations of the use of drug and of the conviction of the efficacy of the natural methods of cure. The number of references made throughout the play to sleep and dreams is remarkable. In turn; the theme is taken up until sleep is eulogized as "balm of hurt minds, great Nature's second course, chief nourisher in life's feast," and from this point attention is concentrated upon the results of sleeplessness, or of sleep perturbed by frightful visions; until it culminates with the walking-scene of Lady Macbeth, and "the thick-coming fancies that keep her from her rest," and her probable suicide. No medical man can sit through this performance without wishing that he had been called in during the early stages of the malady. On all hands the underlying cause is recognized, and the proper method of treatment is clearly indicated. Science was in its infancy, however, or we should have been deprived of the pleasure of this portrayal of an interesting medical and psychological study.—*Lancet.*

Book Notices

AMERICAN RESORTS; WITH NOTES UPON THEIR CLIMATE. By Bushrod W. James, A.M., M.D., Member of the American Association for the Advancement of Science; The American Health Association; The Pennsylvania Historical Society; The Franklin Institute, and the Academy of Natural Sciences, Philadelphia; The Society of Alaskan Natural History and Ethnology, Sitka, Alaska, etc. With a Translation from the German by Mr. S. Kauffmann of those chapters of "Die Klimate Der Erde," written by Dr. A. Woeikof, of St. Petersburg, Russia, That Relate to North and South America and the Islands and Oceans Contiguous Thereto. Intended for Invalids and Those Who desire to Preserve Good Health in a Suitable Climate. 8vo, pp. 285. Philadelphia and London: F. A. Davis. Cloth. Price, $2.00.

It must be admitted that the work before us has a very long title-page, but as there does not seem to be anything superfluous in it, we print the whole of it.

The work contains twelve chapters—the titles of some of which are as follows: "Medical Climatology,"—definitions of climate, modifying influences, atmospheric changes, forests, climate of the Western Continent, etc. Chapter 2. "Benefits and Dangers of Health Resorts,"—dependent upon individual peculiarities, importance of residence in a suitable climate, individualization of climactic prescriptions, mental impressions, congenial company, advantages of American health resorts, etc. Chapter 3: "Sea-side Resorts,"—they afford a variety for either winter or summer residence, etc. Chapter 4: "Fresh-water Resorts,"—lake regions of New York and New Jersey, Thousand Islands, lakes of Florida, etc. Chapter 5: "Mountain Resorts." Chapter 9: "Winter Resorts." Chapter 11: "Mexico and South America."

We heartily assent to the assertion of the author that it is not necessary for Americans to seek relief at the resorts of the humid Riviera, such as Nice, Mentone, San Remo, Santa Monica, Cannes, and similar places; or at the more questionable health resorts, such as Rome, Naples, Algiers, or Palermo, which afford the excitements and unsanitary accompaniments of city life; when in their own land they may enjoy equally good or even superior climates at the health resorts of Florida, Southern California and other places of kindred clime. "Truly, the climate of the health stations located amid the Alpine Heights or the fastnesses of the Pyrenees offers many attractions. But that of the resorts in the Colorado Rocky Mountains compares very favorably in every respect. Many of the European spas are but prototypes of more or less noted mineral springs in this country, numbered here by the hundreds."

As is well known, there is in this country every variety of climate, temperature, soil, humidity, dryness, etc., that can be found in any part of the world, at all desirable for those to seek who are in search of health. In Minnesota, Montana and Dakota there is to be found the low, bracing, stimulating, steady temperature that is beneficial in many cases. In Colorado and other places the atmosphere is rare and dry. In Florida, Texas and other Southern States the invalid can enjoy a perpetual summer, and gather flowers the year round. Besides these localities can be mentioned Southern California, Utah, the Hot Springs of Arkansas, the mountain resorts of West Virginia, Pennsylvania, Green Mountains of Vermont, the Thousand Islands of the St. Lawrence, and hundreds of other places too numerous to recount, which are specially adapted for individual ailments. And all these health resorts are comparatively near at home and can be reached from almost any point in a few hours by rail. There is no ocean to cross and danger of storms to be encountered when emergencies occur requiring the immediate attendance of friends.

"The climactic resources of the United States," says the author, "are rich and varied, ranging, as this country does, from the arctic regions of Alaska to the semi-tropical climate of Florida and Southern California, an extent of 45 degrees of latitude, and from the moisture-laden atmosphere of the ocean and seaboard to the dry, rarified, bracing air of the elevated plateaus or pinnacled mountain ranges."

The work undoubtedly "fills a want." It shows both to medical men and laymen the great resources of our country in health resorts, whose health imparting qualities, inferior to none in the world, can be made use of without the necessity of crossing oceans at great expense and still greater danger. Millions of dollars are taken out of this country every year by its citizens going to foreign countries in quest of health resorts, though far superior can be found at home, but they are not aware of it.

Dr. James, by this volume, will do a good work to his countrymen by informing them of the resources of their own country.

An accurate and valuable map of the United States, extending many inches in length and breadth when unfolded, is bound in the front part of the work. It is printed in colors.

A MANUAL OF INSTRUCTION IN THE PRINCIPLES OF PROMPT AID TO THE INJURED, DESIGNED FOR MILITARY AND CIVIL USE. By Alvah H. Doty, M.D., Major and Surgeon, Ninth Regiment, N.G.S.N.Y.; Attending Surgeon to Bellevue Hospital Dispensary, N.Y. 12mo. Pp. 224. Cloth. New York: D. Appleton & Co.; Cincinnati, R. Clarke & Co. Price, $1.25.

The object of this manual, the author says, is to instruct those who are desirous of knowing what course to pursue in emergencies, in order that sick or injured may be temporarily relieved. Special effort has been made to so arrange the matter and introduce such points as will be of use to the Ambulance Corps connected with the different military organizations. It will be appreciated that it is a difficult task to give to non medical persons information which will properly instruct them to cope with emergencies without encouraging them to usurp the functions of the physician or surgeon.

In order that those who are not physicians may know something of the construction of the human body and the functions of the different organs, considerable space has been devoted to anatomy and physiology. The first seven chapters, therefore, are occupied in describing the skeleton and the various bones comprising it; the joints and the tissues entering into the formation of them; the blood and circulatory organs, as the heart, pericardium, blood vessels, etc.; the organs of respiration, as the trachea, larynx, bronchial tubes, and lungs; the organs of alimentation and digestion, as the teeth, salivary glands, esophagus, stomach, the intestines, liver, pancreas, etc.; the kidneys, bladder, skin, spleen, etc., and last, the nervous system, as the brain, cerebrum, cerebellum, pons varolii, medulla oblongata, spinal cord, cranial and spinal nerves, sympathetic system, etc.

In the remaining chapters are described bandages and dressings, antiseptics, disinfectants, deodorants, contusions and wounds, hemorrhage, fractures, dislocations, sprains, concussion and compression of the brain, poisons and poisoning, convulsions of children, tetanus, shock or collapse, syncope and fainting, etc.

The work contains a large amount of valuable information. Though designed for popular use, yet we feel sure that a great many members of the medical profession could study it with great advantage. We are impressed with this fact from the experience we have had with the certificates of physicians accompanying the claims of individuals for indemnity who were insured in an accident insurance company. Many of these certificates exhibit a most lamentable ignorance on the part of their authors, who are regular graduates of medical colleges, as regards the character and consequences of many important injuries. If such doctors would familiarize themselves with the contents of this little work they would be able to describe in a certificate the injuries of disabled persons far more creditably than they seem now to be competent to do.

We are of the opinion that the work would form an excellent text-book for students, male and female, in schools for training nurses. This would be more especially the case if there were added a very few additional chapters containing instructions for passing the catheter, male and female, and for taking the temperature with the thermometer, etc.

Physicians will render the community a great service by recommending this work to their clients.

SURGICAL BACTERIOLOGY. By Nicholas Senn, M.D., Ph. D., Professor of Principles of Surgery and Surgical Pathology, Rush Medical College, Chicago, Ill. 8vo, Pp. 263. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, $1.75.

There has been no more valuable work than this issued from the medical press for a long time. It should be in the library of every physician interested in the history and etiology of diseases. As the author very correctly states, within a few years bacteriology has revolutionized surgical and medical pathology. All wound complications, many of the acute and inflammatory affections, and, in fact, nearly all the diseases which the physician and surgeon are called upon to treat, have been shown to be caused by micro-organisms. Phthisis pulmonalis, intermittent fever, typhoid and typhus fevers, erysipelas, puerperal fever, pyemia, anthrax, syphilis, and many other affections have been proved by inoculations, over and over again, by different investigations, to be caused by micro-organisms.

A few years ago, before the microscope had made the wonderful developments that it has in physiology and pathology, physicians were divided into Humoralists and Solidists, and carried on most bitter discussions as to the causation of diseases. Those who held the *Humoral Pathology* attributed all diseases to morbid changes in the *humors*, or fluid parts of the body, without assigning any influence to the state of the solids. The Solidists, on the contrary, referred all causes of disease to a morbid change in the solid parts. They maintained that the solids alone are endowed with vital properties.

In consequence of the great discoveries that have been made in the last few years in bacteriology, it seems as if the word has become almost synonymous with that of pathology, or has taken its place, for the pathology of at least a very great many diseases now has reference to the character of the microbes which cause them. It has been proved that a certain micro-organism produces anthrax, and no other affection; that another kind is followed by tuberculosis, and still another variety brings about puerperal fever, etc.

The results of recent investigations with the microscope must be to relegate to the lumber rooms, as worthless, the former standard works upon pathology. And the physician and surgeon whose knowledge of diseases was obtained from these works, will soon find that it is knowledge of no value—that they must unlearn what they have learned, and begin anew to study the history and etiology of diseases.

The work of Dr. Senn will be found to be of great value by all who wish to study the recent discoveries that have been made in bacteriology. He has presented the investigations by different persons in as concise a manner as possible, but has omitted nothing necessary to impart a fair knowledge of the subject which he has undertaken to elucidate.

Editorial.

DELAY.—The delay that has occurred in issuing the MEDICAL NEWS, on account of which the present number is very late in appearing, has been the result of circumstances beyond our control. We are now making active efforts to catch up, and hope it will not be very long until the journal will appear on time.

We invite the attention of our subscribers to the great improvement in the quality of the paper on which the MEDICAL NEWS begins, with this number, to be printed. Of course, while this improvement adds greatly to the appearance of the journal, it adds to our expense. But we hope to be fully compensated by increase of patronage—especially by the way of receiving new subscriptions.

DESCRIPTION OF THE BACILLUS TUBERCULOSIS.—We copy from Senn's *Surgical Bacteriology* a description of the Bacillus Tuberculosis, that those of our readers, who may not have any work upon the subject, may have it for reference. Dr. Senn's work has just been issued, and is, therefore, the very latest authority upon Bacteriology.

On page 159 will be found the following description: "The bacillus described by Koch as the essential cause of all forms of tubercular inflammation, appears in the shape of very thin rods, from two to eight micromillimeters in length and rounded at the ends. They are straight or curved, and frequently beaded—occur singly, in pairs, or in bundles. In the tissues they are found in the interior of giant cells and within and between epithelioid cells. The bacilli of tuberculosis are non-motile, and consequently possess no power of locomotion, and can not penetrate into the tissues without assistance. Spore-formation occurs, even within the animal body, the spores having the appearance of clear vacuoles.

"*Methods of Staining.*—For section-staining Ehrlich's method is the best:

Saturated alcoholic solution of methyl-violet or fuchsin,	11 parts.
Aniline water,	100 "
Absolute alcohol	10 "

"Sections are left for twelve hours in this solution. Treat the specimen with 1:3 solution of nitric acid a few seconds. Wash in alcohol (60 per cent.) for a few minutes; after-stain with diluted solution of vesuvin or methylene blue for a few minutes; wash again in 60 per cent. alcohol, dehydrate in absolute alcohol, clear with cedar oil, mount in Canada balsam. The examination of fluids can be done rapidly and most satisfactorily by Gibbes' method.

"GIBBES' MAGENTA SOLUTION:

Magenta	2 parts.
Aniline oil	3 "
Alcohol (specific gravity 0.830)	20 "
Distilled water	20 "

"Stain cover-glass preparations in this solution for fifteen or twenty minutes; wash in (1:3) solution of nitric acid until the color is removed; rinse in distilled water. After-stain with methylene-blue, methyl-green, iodine-green, or a watery solution of crysoidin, five minutes; wash in distilled water until no more color comes away. Transfer to absolute alcohol for five minutes, dry, and preserve in Canada balsam."

Dr. Senn says that the best *culture medium* is solid sterilized blood-serum of the cow or sheep, with or without the addition of gelatine at a temperature of 37° to 38° C. (98.6° to 100.4° F). The bacillus grows very slowly, and only between the temperatures of 86° and 105.8° F. In about a week or ten days the culture appears as little whitish or yellowish scales and grains. The bacillus can also be cultivated in a glass capsule on blood-serum, and the appearance of the growth studied under the microscope. The scales or pellicles are then seen to be made up of colonies of a perfectly characteristic appearance. The growth ceases after three or four weeks. The blood-serum is liquefied, unless putrefactive bacteria contaminate the culture.

It has been found that coagulated blood-serum is improved for the growth of the bacillus of tuberculosis by adding peptone, soda and sugar. A further addition of 6 to 8 per cent. of glycerine favors the growth of the bacillus still more, while at the same time it prevents the formation of a crust upon the culture medium, which otherwise forms by evaporation. Successful cultivations have also been made upon agar-agar bouillon, to which was added 6 to 8 per cent. of glycerine, kept at a temperature of 102.2° F. Cornet has made numerous experiments in Koch's laboratory to ascertain the inocubility of tuberculosis through abrasions of the skin. He found that if a pure culture of tubercle bacilli is applied to a cutaneous abrasion, the result in most, if not in all cases, is a local tuberculosis in the adjacent lymphatic glands, and, later, a general miliary tuberculosis. The advances in our knowledge of the etiology of tuberculosis, the discovery of the bacillus, and the production in animals of tuberculosis by implantation of lupus tissue have finally settled the identity of tuberculosis and lupus. Koch produced artificial tuberculosis in over five hundred animals with material from different tubercular lesions, and examined them all with greatest care.

MILLIONAIRE'S FEE TO A PHYSICIAN.—In the January issue of the MEDICAL NEWS we made mention of the contemptible pittance, in the way of a fee, which had been offered Dr. Gorter, formerly of Baltimore but more recently of New York, by the friends of Robert Garrett for seven months' arduous professional services rendered that crazy millionaire, while on a trip around the world. He had, for years, expended all the energies of his mind in gathering wealth, as if to horde money was the chief end of man—stifling all the higher aspiration of the intellect—until his mind became broken down and was only a wreck. While he was thus an imbecile his friends started on a foreign trip with him, taking with them Dr. Nathan R. Gorter as medical adviser, who had attended professionally Mrs. Garrett, Mr. Robert Garrett's mother, during her last illness, and was at the bedside of Mr. Garrett's father, the late John W. Garrett, when he died, just previous to Mr. Robert Garrett's return from Europe, in the fall of 1887, when his mental troubles were first noticed by his friends. Dr. Gorter was practicing his profession in New York when at the special request of the Garretts he gave up his practice to become the attendant of the millionaire on his travels.

As we stated in our January issue, Dr. Gorter, after having faithfully attended upon the maniac for seven months, day and night—his labors being most arduous—was compelled through exhaustion to relinquish his task and return home. For all of his services and personal sacrifices and abandoning his private practice, he was offered the *magnificent fee*, as compensation, of *five thousand dollars*—a sum which we showed was not much in excess, in proportion to the length of time he was employed, of what we knew a common, ignorant nurse received for taking charge of a rich man's son, of Cincinnati, on a trip to Europe and return.

We are happy to say, however, that all physicians who attend upon the families of millionaires are not treated as shabbily as Dr. Gorter has been. We hope, in fact, that the Garrett family is the only millionaire family who do not consider that a physician's services are of the highest scientific value and do not have in them a single menial element—that not unfrequently their value is such that money can not compensate for them, and can only be regarded as a testimonial.

As evidence of the appreciation of a doctor's services by a millionaire, and which has led us to again refer to the treatment of Dr. Gorter by the Garretts, we will mention that Dr. George Shelton, of New York, has recently been presented by Mr. H. M. Flagler, of the same city, with securities of the par value of $50,000 (market value about $87,000) in consideration of his faithfulness and skill in attending the case of Mr. Flagler's daughter, Mrs. Benedict, who died on her husbard's yacht off Charleston very recently, after a long illness.

The writer who makes this act of generosity and justice public, says that this fee is the largest but one ever paid to a physician. Maybe it is, but that is not important. The important feature is that the possession of great riches does not necessarily belittle the soul, and so eradicate those higher moral faculties, that an individual becomes brutalized in his feelings and ceases to be a man in the higher sense of that term.

INGLUVIN IN THE VOMITING OF PREGNANCY.—Dr. Popp (*Pester Med. Presse*, No. 40, 1888) reports having achieved considerable success with Ingluvin in the vomiting of pregnancy. Having a very obstinate case, upon which he had exhausted the entire resources of the pharmacopœia, he administered three times daily, one-half hour before mealtime, eight grains of Ingluvin, and directly afterward two tablespoonfuls of one per cent. hydrochloric acid solution. An improvement was observed after a few doses had been taken, and a cure effected after the treatment had been continued for three weeks.—*Deutche Med. Wochenschrift*, Jan. 17, 1889.

THE CINCINNATI ACADEMY OF MEDICINE.—This Society has elected for the ensuing year the following officers: President, Dr. William Judkins; First Vice-President, Dr. Geo. W. Ryan; Second Vice-President, Dr. W. S. Christopher; Recording Secretary, Dr. Geo. A. Fackler; Corresponding Secretary, Dr. J. M. Withrow; Treasurer, Dr. Geo. E. Jones; Librarian, Dr. David DeBeck; Trustees: Dr. S. G. Heighway, Dr. Giles S. Mitchell, Dr. C. D. Palmer.

THERE is no use disguising the fact, or disputing the same, that some people will have medicine, no matter what their physicians may say. If the doctor is called in for some slight ailment and does not prescribe, but directs rest, diet and the efforts of nature, he is voted an ignoramus, and on his departure the drug-store is visited and some physic bought and taken. This prejudice is not due to multiplicity of medicaments or drug-stores, but is apparently inherent in the human animal. It exists in countries where the pharmacist has never been known, and it flourished long years before the druggist existed as a genus. The desire to take physic no doubt arises from its effects, which in some disorders are markedly beneficial, and it is not to be supposed that a suffering public will discern which complaints are and which are not benefited by drugs. The druggist will continue, as heretofore, to supply a long-felt want.

MORE NEW ELEMENTS.—The investigation of the so-called "rare earths," which has engaged the attention of Lecocq de Boisbaudran, Crookes, and other investigators, has rendered it evident that several of the bodies, which had so far been regarded as elements, were themselves compound, or two or more elements. In this way some four or five of the supposed elements of the "rare earths" have been made out already to contain, perhaps, ten or twelve different elements, the nature of which has, however, not yet been determined, chiefly because the material from which they can be obtained is of rare occurrence, and because the separation of the several bodies is excessively difficult and tedious, owing to their great similarity. The spectroscope, however, furnishes the chief guide in ascertaining the claims of any of the bodies to the title of an element. Gerhard Kruss and L. F. Nilson have recently studied five of these bodies, namely, ermium, holmium, thulium, didymium and samarium, and have shown conclusively that none of these can be regarded as elements. In fact it appears from their investigations that not less than about twenty new elements will have to be assumed to take part in their constitution.

THE LEGAL TREATMENT OF INEBRIETY.—*The American Lancet* makes some excellent points on this question, deduced from a discussion by Dr. T. D. Crothers in the *Journal of Inebriety*, as follows:

"The legal treatment of inebriety is unchanged to-day. Although it occupies two-thirds of the time of the courts, all teachings of science and a larger knowledge of the inebriate and his malady are ignored.

"The ruinous error of punishment by fine and imprisonment of inebriety, and petty crime associated with it, which notoriously increases and perpetuates the inebriate and criminal, is a fact demonstrable in every community.

"Thus public opinion, through medieval theories and laws, is training and preparing a class of inebriates who first commit petty, then capital, crime, with a certainty that can almost be predicted.

"From a scientific study of these cases it is clearly apparent that they are diseased and incapacitated to act sanely. Alcohol has palsied the brain and made them madmen. The very fact of continued use of alcohol is evidence of mental impairment and unreasoning act and thought.

"Among the mentally defective, the insane and inebriates, the death penalty is followed by an increase rather than a diminution of crime.

"The inebriate murderer should be confined the rest of his life in a military work-house hospital. He should be under the care of others, as incapacitated to enjoy liberty, and incompetent to direct his thoughts or acts.

"A change of public sentiment and law is demanded, and a readjustment of theory and practice called for. The criminal inebriate occupies a very large space among the armies of the defective who threaten society to-day, and his care and treatment must be based on accurate knowledge—not theory.

"Inebriate murderers should never be placed on public trial, where the details of the crime are made prominent, or the farcical questions of sanity are publicly tested. They should be made the subject of private inquiry, and placed quietly in a work-house hospital, buried away from all knowledge of, or observation by, the world.

"The contagion of the crime and punishment would be avoided, and his services might repair some of the losses to society and the world."

BRAIN-WORKERS.—The *Medical Age* says that the most frequent fault of the brain-worker is excessive application to work. "The most intense and fatiguing of toils is pursued almost uninterruptedly, food is neglected, and the claims of exercise and sleep are but imperfectly admitted. Two hours' exercise in the open air, daily, is probably a minimum, and might prudently be exceeded. The brain-worker must live sparingly rather than luxuriantly; he must prefer the lighter classes of food to the heavier, and he must be very prudent in the use of alcohol. Tobacco and tea are apt to be favorites with him, and their immoderate use may require to be guarded against. It is a nice question whether he needs more or less sleep than other men. Many men of genius are light sleepers; probably in some cases a misfortune; but there seems some ground for the notion that more than a moderate indulgence in sleep is unfavorable to successful mental effort."

A commentator upon the above remarks says that he can not fully agree with them. Mental effort, he says, and we agree with him, causes waste of tissue-elements quite as much as bodily exertion, and this demands a full supply of food. What with dyspepsia and absence of appetite, the results of deficient exercise, and the influence of preconceived ideas as to the use or disuse of special articles of food, the brain-worker is very apt to receive too little nutriment to make up for the waste. Especially is this the case when he, unconsciously, perhaps, replaces food by the use of tobacco, tea, alcohol, or opium.

Some advise to go supperless to bed. This is a wrong notion. It is a fruitful source of insomnia and neurasthenia. The brain becomes exhausted by its evening work, and demands rest and refreshment of its wasted tissues; not by indigestible salads and "fried abominations," but by some nutritious, easily-digested and assimilated articles. A bowl of stale bread and milk, of rice, or some other farinaceous food, with milk or hot soup, would be more to the purpose. Any of these would insure a sound night's sleep, from which the man would awaken refreshed.

The man who desires to realize from his stock of brains and from his bodily vigor to the utmost possible amount must regulate his life by rigid precepts. He must eat food suited to his needs and the powers of his stomach; he must eschew artificial stimulants; he must keep the Sabbath, at least physiologically. He *must* keep his mind free from financial worry; he must steel his heart against the allurements of Bacchus and Venus.

THE CINCINNATI SANITARIUM.—We have received the "Fifteenth Annual Report of the Superintendent" of this institution, located at College Hill, near Cincinnati. It contains, as usual, no little interesting information. Dr. Orpheus Everts, a distinguished expert in mental affections, is at the head of the medical department. It is for the year ending November 30, 1888.

There were 69 patients remaining in the hospital at the end of the last preceding year, November 30, 1887, and 70 at the close of the present year, November 30, 1888.

Ninety-eight men and fifty-three women were admitted within the year, making the total number 151 admissions, and an aggregate of 220 patients treated within the year.

Of the whole number treated within the year, seventy-four —fifty-eight men and sixteen women—were discharged as having "recovered;" showing a ratio of recoveries equal to fifty per cent. of the number admitted. This showing, it will be generally conceded, in the light of the fact that a great many patients are committed to private hospitals for the insane experimentally, or with expectations of speedy recovery, and are withdrawn because of the inability of friends to discharge the necessary pecuniary obligations for a longer and somewat indefinite term, often before experimental treatment has been fairly tested, is in accordance with the most liberal expectations. That a larger number would have recovered, had not so many patients been thus removed, may be inferred from the fact that forty three patients were discharged as "improved" within the year, some of whom have since recovered. Twenty-five patients were discharged as "unimproved," and eight died.

The report is not composed of a great many pages, as is the case with the reports of a great many State institutions for the insane, filled with various tables showing the occupations of patients, places of nativity, social state, etc., but contains much practical information in regard to insanity of great interest to all intelligent persons. In fact, we consider the report worthy of preservation for reference and study. Dr. Everts, the Superintendent, has had a long and extensive experience in the treatment of insanity, and has amassed a large amount of valuable information in regard to the disease, so much so, in fact, as to be justly considered a high authority in all pertaining to it.

As regards *criminal conduct* Dr. Everts makes the following interesting remarks: "Whatever sentimental immunity may be extended to criminals because of a fuller and clearer recognition of the relation of their conduct to structural peculiarities, defects, or depravities, as acted upon by environments, society will not hesitate to protect itself from the defective or diseased, when seen in their proper light, with greater wisdom and efficiency, perhaps, than has characterized its measures of defense in past ages, however differently actuated. Society in ceasing to be savage and vindictive, does not necessarily become impotent or effeminate."

As regards *suicide* the Doctor makes the following statement: "So irrational, indeed, is suicide when physiologically considered, that it may well be questioned if those apparently exceptional cases of self-destruction, having for their motive escape from unbearable physical pains, or inevitable disgrace, should not also be recognized as morbid, having a basis of disease, or structural disorder, from which suggestions of conduct spring."

In another paragraph in which he alludes to the religious views held by many in regard to suicide, he expresses it as his belief that the taking of one's own life is *prima facie* evidence of insanity.

We would be pleased, for we feel sure that our readers would be greatly interested thereby, to review this recent Report of the Cincinnati Sanitarium at still greater length—quoting still further the views of Dr. Everts on different manifestations of mental phenomena—but our space will not permit. We think the friends of the Cincinnati Sanitarium can congratulate themselves that they have so distinguished an alienist as Dr. Everts in charge of it. Persons who commit their friends to the institution for treatment can feel that every means known to science for their restoration to mental health will be employed. There is no like institution in this country that has a more able, if so able, a physician at its head.

CONVENTION FOR REVISING THE PHARMACOPŒIA. — Dr. Robert Amory, President of the Convention of 1880, calls upon the several incorporated medical societies, incorporated medical colleges, incorporated colleges of pharmacy, and incorporated pharmaceutical societies throughout the United States of America, the American Medical Association, and the American Pharmaceutical Association, to elect a number of delegates, not exceeding *three*, and upon the Surgeon-General of the Army, Surgeon-General of the Navy, and the Surgeon-General of the Marine Hospital Service, to appoint, each, not exceeding *three* medical officers, to attend a General Convention for the Revision and Publication of the Pharmacopœia, to assemble in Washington on Wednesday, May 7, 1890, at noon. The several bodies, as well as the Medical Departments of the Army, Navy, and Marine Hospital Service, are requested to submit the Pharmacopœia to a careful revision, and to transmit the result of their labors to the Committee of Revision at least three months before the meeting of the General Convention. The several medical and pharmaceutical bodies are requested to transmit to the President of the Convention of 1880 the names and residences of their respective delegates as soon as they shall have been appointed; a list of these delegates will be published, for the information of the medical public, in the newspapers and medical journals in the month of March, 1890.

THE Emperor of Austria has conferred on Pasteur the order of the Crown of Iron, which gives him the right to the title of Baron, and the insignia of nobility.

MESSRS. ELI LILLY & COMPANY, of Indianapolis, have issued a work entitled HAND BOOK OF PHARMACY AND THERAPEUTICS. The aim, as stated in the introduction, is to furnish the busy practitioner a reliable means of ready reference, at once concise, systematic and authoritative, to which he may refer with confidence in cases of doubt. Younger members of the profession and medical students will find this work full of suggestions. It will be sent free to any physician, druggist or medical student by addressing Eli Lilly & Co., Indianapolis, Ind., mentioning this journal.

THE
CINCINNATI MEDICAL NEWS.

VOL. XXII. No. 256. Old Series. APRIL, 1889. VOL. XVIII. No. 4. New Series.

Original Contributions.

Epicystic Surgical Fistula for Cystoscopic Exploration; Intravesical Treatment and Drainage.

BY JOHN D. S. DAVIS, M.D., BIRMINGHAM, ALA.

Read before the State Medical Association of Alabama, April 11, 1889.

EPICYSTOTOMY has become an established and frequently practiced procedure, and the danger incident to opening the bladder through the abdominal wall is so slight that patients suffering from almost any vesical trouble are encouraged to have the bladder opened for diagnostic purposes and treatment at a time when the general health remains unimpaired; a practice which, a few years ago, would not have been resorted to by the most aggressive surgeon.

Catarrh of the bladder, irrespective of its cause, is always followed by a series of consecutive pathological changes which, independently of the partial or complete interruption of the passage of the urine, tend to destroy life. A dilatation of the bladder and ureters by retention of urine may give rise to such a degree of distension as to destroy life, from suspension of important functions by mechanical pressure. During the stage of inflammation a paretic condition may occur, the blood-vessels in the vesical wall lose their support; and transudation and exudation take place into the paravascular tissue, which combined with capillary stasis attending this stage of the disease, results in sloughing, infiltration, pyæmia, peritonitis and death. The damming up of the urine may, and does often, cause surgical-kidney, epididymitis and tetanus.

The treatment of chronic vesical catarrh resolves itself into a consideration of the causes producing the disease, many of which, the presence in excess of certain inorganic constituents of the urine, stone, stricture and hypertrophy, are capable of correction; whilst others—such as malignant tumors and certain conditions of the prostate—may only admit of a palliation of the symptoms to which they give rise and the removal of which must be the first object in treatment. But when a paretic condition of the bladder exists provision must be made for the complete continuous emptying of the viscus; its thorough cleansing by frequent irrigation with hot sterilized water; and the promotion of a healthy tone in the mucous membrane and muscular structure of the bladder. The frequent introduction of catheters for drawing off residual urine and washing out the bladder has been productive of much harm, and, instead of giving relief, proved to be, by reason of their frequent introduction into the inflamed bladder to draw off the urine two or three times a day, a source of immediate and alarming symptoms. These facts are cogent reasons for adopting surgical means in all cases of intra-vesical troubles as soon as a diagnosis can be made, and often when it can not otherwise be made, for the complete emptying of the bladder, thorough cleansing, diagnosis, and intra-vesical treatment.

The epicystic surgical fistula is designed for drainage, intra-vesical treatment and cystoscopic exploration, and may be divided for consideration under the following heads:

I. Definition of epicystic surgical fistula.

II. Surgical resources in the formation of the epicystic surgical fistula.

1. Preparation for the operation.
2. Anæsthesia.
3. Position.
4. Incision and opening bladder.
5. Intra-vesical exploration and treatment.
6. Toilette and after-treatment.

III. Advantages of the epicystic surgical fistula.

1. Cystoscopic exploration.
2. Intra-vesical treatment.
3. Drainage.

I.—DEFINITION OF EPICYSTIC SURGICAL FISTULA.

Epicystic surgical fistula is the title here given to a suprapubic fistula into the bladder created by the surgeon for exploration, intra-vesical treatment and drainage. A fistula which, acting as an artificial urethra, is capable of giving free access to the inside of the bladder for cystoscopic exploration, to provide a ready, convenient and comfortable means of emptying the bladder at will, and give the surgeon a competent opening into the viscus for intra-vesical applications.

It constitutes an essential element in the speedy and complete evacuation of the contents of the bladder in all epicystic operations, and imitates nature in the restoration of its own continuity and repair as the pathological changes within the bladder subside.

II.—SURGICAL RESOURCES IN THE FORMATION OF THE EPICYSTIC SURGICAL FISTULA.

(1.) *Preparation for the Operation.*—The presence of two assistants, though not necessary, may be of valuable aid. A temperature of 80° or 85° Fahr. should be maintained in the operating room from the beginning to the end of the operation. All hair is to be shaved from the pubis and all the details of antiseptic surgery are to be carried out so far as cleaning the pubis and abdomen. The bladder is emptied and thoroughly washed with warm water. When the water returns clean the bladder is slowly distended with warm sterilized water thrown into the bladder by means of a fountain syringe, with nozzle in urethra—a degree of pressure sufficient to distend the bladder to its utmost capacity—which can never be too great for the resistance of the bladder. It is better to fail in filling the bladder than to distend the bladder beyond the limit of competency. Indeed it is not necessary to fill the bladder to any degree of resistance. I have operated when the bladder was in an irritable condition and would not tolerate distension greater than the capacity of two ounces, and had no difficulty in avoiding the pre-vesical fold of peritonæum or finding the bladder. The water is secured in the bladder by tying the penis at the base with a rubber tube.

A colpeurynter is next to be well oiled and inserted into the rectum—the rectum having been previously emptied by enema—and filled with warm water. This distension brings the bladder into view above the pubis.

(2). *Anæsthesia.*—My preference for chloroform, is the result of my own personal experience with it. It is not free from objections, as its depressing effect on the heart is well known. The operation usually requires fifteen minutes; and, hence, its prolonged use would be unnecessary and uncalled for. The objection to ether is the suppression of the excretions and the frequency with which bronchitis is produced when administered to persons advanced in years. The best course to pursue, when the operation is prolonged, is to follow the use of chloroform by ether. The patient must be kept profoundly under the influence of the anæsthetic from the first incision until the superficial wound is closed.

(3). *Position.*—The patient is placed on the back on an ordinary operating table, with the legs extended as if in a position for perfect comfort and rest. Many surgeons claim advantages in the position recommended by Trendelenburg. Eigenbrodt emphasizes the fact[*] that the elevation of the pelvis in Trendelenburg's position[†] helps the surgeon to avoid the prevesical peritoneal fold at the time of the incision of the bladder.

I have employed this posture for intravesical operation by means of the supra-pubic incision, with no advantage over the ordinary flat-back position. With two openings in the bladder for a continuous stream of clear water I have no trouble in illuminating every part of the bladder with the electric surgical light am thus enabled to examine the entire intravesical wall. Undoubtedly the position recommended by Trendelenburg, possesses advantages which to the author more than myself make it highly ideal. As for myself I prefer and recommend the flat-back position.

(4). *Incision and Opening Bladder.*—A perpendicularincision three or four inches long is made in the median line above the symphysis pubis. The recti muscles are separated to symphysis. If the pyramidalis are in the way, the fibres should be cut. The transversalis facia is divided on a grooved director from symphysis to within one inch of upper margin of superficial wound. Instead of following Guyon's manœuvre, I catch the bladder with a tenaculum on a line with the symphysis, through the prevesical fat, and cut through with a bladder knife into the bladder with one smooth, clean incision, to prevent undue disturbance of the cellulo-adipose tissue between the bladder and pubis and avoid infiltration. I have never seen a case where it was necessary to put up the prevesical fat, and with it the peritonæal cul-de-sac. If the bladder is caught on a line with the symphysis and cut downward, no fears need be had for the peritoneum. Cutting this prevesical fat prevents its after dropping down over the opening into the bladder and acting as a valve to prevent easy escape of urine and causing infiltration. And, too, such a procedure gives a smooth incision throughout, and it is almost impossible to have infiltration, even when no drainage-tube is left in the bladder and the urine is left to flow out through the fistulous track and taken up by a layer of absorbent cotton. In making the incision into the bladder, no attention is to be paid to any vein or veins which are sometimes met with. If cut, they will stop bleeding when the bladder is dropped back and the rectal bag removed. The operation is usually bloodless in the sense of hemorrhage. I have operated without the patient losing more than one drachm of blood.

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[*] L. c., p. 72. Cf. Lang, *Med. News*, Dec. 4, 1886.

[†] In Trendelenburg's position the patient's legs are held over the shoulders of an assistant with the body resting on an incline table, much in the position which hogs are swung for spaying.

(5.) *Intra-vesical Exploration and Treatment.*—The finger is carried into the bladder and a thorough search made for any tumors, villous growths, or foreign bodies. The bladder is now emptied and the rubber around penis untied and the bladder well washed out with hot sterilized water. The bladder can now be examined with the cystoscope and surgeon's electric light. If tumors be found, if practicable they should be removed; villous growths and any foreign body found should be removed. If nothing is found in the bladder, the surgical fistula, in the absence of malignancy, will be all that is required to relieve the cystitis.

(6.) *Toilette and After-Treatment.*—The bladder is allowed to drop back into the pelvis and the superficial wound so closed by two sutures (including the skin and superficial facia only), in the lower portion of the incision and one in the upper portion of the incision, as to leave a fistulous track of equal size from bladder to juncture of upper third and middle third of the superficial incision. A large rubber catheter is now to be introduced into the bladder through the opening, and its distal extremity allowed to enter a urinal placed in the bed between the patient's thighs, or preferably at the patient's side. Professor F. Trendelenburg, director of the surgical clinic of the University of Bonn, proposed, for draining the bladder in supra-pubic lithotomy, the T-tube in latero-abdominal position and open wound treatment as the simplest, safest and best. He makes an antiseptic dressing of iodoform gauze around the T-tube. There can be no real necessity for a tube of any kind to be introduced into the bladder for the purpose of conveying the urine from the bladder to prevent infiltration, irritation of superficial fascia and soiling of dressings.

If the urine is kept acid, by the administration of citric acid or some other more palatable acid drink, no better antiseptic than the acid urine can be secured for the constant bath of the parts. It should be allowed to flow out through the wound and be absorbed by a pad of absorbent cotton placed loosely over the wound, and removed as often as soiled by the outflowing urine. By this method of emptying the bladder no possible small amount of urine can be impeded in its outflow, which is the case around and outside of the tube, when catheter or tube is left in for any length of time—a source of no little annoyance at times. This little collected or retained urine, around the outside of the tube alone, I have seen produce a hard chill and elevation of temperature, and become for the time an immediate, alarming and aggravating source of trouble. I have never seen the skin made sore or chafed by the overflowing urine in epicystotomy, or from its after escape through the surgical fistula.

The bladder should be washed out twice daily with hot sterilized water, by means of a fountain syringe, with its nozzle introduced into the urethra, the water escaping through the epicystic fistula and guided into a bed-pan under the patient. The superficial stitches are taken out at the end of a week, and intermittent catheterization by the fistula is then resorted to for the sole purpose of training the fistula and preventing its rapid closure. It is not necessary to catheterize for the purpose solely of drawing off the urine. In one case I never drew the urine save for the purpose of analysis, but occasionally introduced a rubber bougie to prevent the closure of the fistula. The drainage by the fistula alone is admirable, and the fistula will be well formed in twenty or thirty days, competent to retain urine without dripping and to allow its escape in a good projecting stream at will. With no tearing of the tissues, and, with a clean cut, the drainage is perfect and the dangers are *nil*.

III.—ADVANTAGES OF THE EPICYSTIC SURGICAL FISTULA.

(1.) *Cystoscopic Exploration.*—Nitze has by means of the cystoscope been enabled to diagnosticate tumors of the bladder in nine cases in which rectal palpation, the sound and other means had furnished negative results. One of the great difficulties in the cystoscopic exploration of the bladder is the presence of pus, mucus and sometimes blood, which render it excedingly difficult to maintain a translucency of the fluid used to distend the bladder. By means of a simple fountain syringe a constant current of clear water may be kept within the bladder so essential to a complete observation of the trigonum Lieutaudii, the most interesting part of the viscus, the ureters; and to examine any affection of that viscus. The fistula may be made for temporary purposes of cystoscopy by the Peterson-Guyon-Perier operation; but I can see great advantages from a different operation, by Dr. Hunter McGuire, the object of which tends to eliminate as well as detect the trouble within the viscus; and, too, in the final construction of a permanent fistula, gives an easy after-method of exploration, and makes a better artificial method by reason of its length and extension upward of two to three inches. Diagnostic purposes are met by the possibility of immediate detection of all local conditions, such as tumors, calculi, foreign bodies, neoplasms, the collection of fluids from the ureters, etc.

(2.) *Intra-vesical Treatment.*—Having, by means of the epicystic exploration, revealed the true nature of the intravesical trouble, the treatment resolves itself into the immediate necessities of the case. For instance, prostatectomy may be necessary, villus papilloma may be found and should be remedied; predunculated growths may be found which should be removed by the scissors or Paquelin's cautery, etc. In such cases the opening in the bladder, sufficient to introduce the finger, should be enlarged downward under the symphysis pubis, and the operation indicated should at once be performed. The object of the formation of the permanent surgical fistula is to meet the after-indications in such operations, the details of which do not properly come within the province of this discussion. However, it is sufficient to state—what is reasonable and practicable—that a better means by which the intra-vesical wall can be reached and treated therapeutically has not yet been devised.

(3.) *Drainage.*—Permanent after-drainage in all intra-vesical operations can not be necessary; but is highly essential to secure good and sufficient drainage until the paravascular tissue is disengorged, the cystitis is relieved and the urine becomes normal and passes per urethra unobstructed. And until this end is attained, complete artificial arrangement for the escape of the contents of the viscus must be made. In such cases of prostatic hypertrophy or malignant growths when removal of the obstruction is impossible or contra-indicated, the epicystic surgical fistula is clearly indicated and essentially necessary. It meets every possible indication for local treatment, and gives the only controllable, ready and free drainage to viscus and kidneys. Urinary back pressure, as the result of incompetency of the urethra, from the various immovable prostatic troubles, is often an immediate and remote cause of surgical kidney, which can only be removed or relieved by supra-pubic drainage. In conditions of the bladder, of long standing cystitis, as in the case reported by me in the *Virginia Medical Monthly*,* in which the urethra, though made competent by cutting, was not sufficient to keep the bladder emptied without catheterization—a procedure which kept up a constant vesical inflammation, which, combined with capillary stasis attending the inflammatory process, resulted in paresis.

I now have the pleasure of introducing that case, Mr. T. A. Nixon, to you fifty-eight days after the operation. His condition to-day is sufficient guarantee for all I have said in favoring the formation of an epycistic surgical fistula for the relief of chronic vesical catarrh. The result in this case is more than I promised. He can retain his urine several hours and without dripping of urine or pain to bladder. Urine completely under control and bladder relieved of pain.

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Complications Following Abdominal Section.

BY J. M. BALDY, M. D., PHILADELPHIA, PA.

Read before the Philadelphia Obstetrical Society.

THE attention of surgeons in the past, and at present, has so commonly and almost exclusively been called to the perfection of the different abdominal operations, that sight is lost of the possible complications which may follow, or, if noticed at all, they are kept locked up in the bosom of the individual himself, and the profession at large hears, and consequently knows, very little about these annoying and, at times, serious results. In consequence of this medical men are continually running across these patients, and are having their faith in the value of the original operation shaken. Most men go into an operating room, see the operation, have a pathological specimen shown them, and then go away satisfied as to the justifiability of the operation, and confident as to the results. They may or may not see the patient several times during the treatment, but are generally satisfied with an inquiry as to how the patient is progressing, and finally have the satisfaction of hearing that she is well and has been discharged. The case is probably reported in some society or medical journal as cured, and thus the favorable statistics are swelled, and inexperienced and untrained men are led into attempting the operation, usually with the result of sacrificing several lives before they are frightened off.

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* *Virginia Medical Monthly*, April, 1889. *Alabama Medical and Surgical Age*, April, 1889. *New York Medical Journal*, April 13, 1889.

It is about time for surgeons to look at and seriously study some of the dark sides of abdominal surgery; for a dark side it certainly has. Our results, as far as removing disease is concerned, are about perfected; let us now turn some of our energies into preventing or alleviating some of the after-complications, which are, in many cases, as bad as the original disease itself; probably not causing such immediate danger to life, but producing symptoms just as hard to bear, as far as the patient is concerned, and practically, to her belief, fully as bad at times as her former trouble:

When I first began to turn my attention particularly to gynecological surgery, especially the abdominal variety, I was considerably worried that my cases did not always run as smooth and uncomplicated a course as I had been led to believe those in the hands of my friends and others did. That they were not perfectly well when they got up, and came to me, sometimes for weeks, complaining of one thing or another, was a source of great mortification; and, finally, I began to learn that troubles continued and others appeared that were extremely hard to control. At first, supposing that I was the only one so afflicted, I thought that there must be something radically wrong, either with my operation or with my after-management; and yet I could not reconcile these thoughts with the fact that I usually had the very best of assistance at the operation, and the constant advice of most competent men in the conduct of the after-treatment. Now, I am constantly seeing and hearing of cases with similar troubles as my own, and some with complications I have never personally met with. These cases are by no means confined to the practice of any one man, or any class of men, but represent patients of nearly every prominent operator in this city. Nor do I think that these results are confined to Philadelphia, but will be found wherever abdominal surgery is practiced.

To fully consider the causes, prevention, and cure of these complications, is beyond the scope of this paper, my object being simply to call general attention to the prevalence of their existence, and to make a few remarks on the most frequent of them. Some of the subjects have been, from time to time, noted by other surgeons, and have been called to the attention of the profession, only to be dropped almost as if they were subjects not to be handled and publicly discussed. Among the most frequent of these might be mentioned hernias, simple fistula-tracks, fecal fistulas, pain—pelvic or abdominal, and edema of the lower extremities. I have seen many patients suffering from all of these troubles, and have had some of them follow in my own practice.

Holmes has found that he had thirty per cent. of hernias following his operations. Now as these cases were, for the most part, hospital patients, he could certainly not have kept track of them all; and so, if the whole truth were known, the per cent. would be much higher. It would seem at first sight that a patient, developing a ventral hernia, would return for treatment; but not so, for in my own cases, with the exception of one patient, none of them ever reported, and I only discovered their existence from outside information. Thirty per cent. is, I think, a fair average of hernias following section. Most of the operators with whose work I am familiar, have, I am confident, almost if not quite that proportion. I know of many cases in this city of which the operator himself is not cognizant. Now, a ventral hernia is by no means a harmless thing. I can recall women who suffer almost as much from the presence of the hernia as they did from the original disease —indeed, even more. One case I know of had originally a small unadherent ovarian cyst, found in the course of a general examination, and which gave her few or no discomforts; she now has a good-sized ventral hernia, from which she suffers considerably. These hernias constantly tend to increase in size, and when the woman is one who must be on her feet constantly, carrying heavy burdens, lifting heavy weights, or, in fact, doing anything which will increase the tension at the abdominal opening, the result must invariably be a rapid enlargement of the protrusion, with all the accompanying distresses. There is no good reason why some of these cases should not eventually, from various causes, become strangulated, and require a second and more serious operation; this has actually occurred. The mere protrusion and displacement has caused so much trouble, that an operation has been devised for the closure of the opening. The causes of hernia have been somewhat a matter of dispute, some contending that the drainage-tube is most at fault, while the advocates of the tube repudiate that idea. Then, again, improper suturing is charged with the results. Whatever the cause, the lesion is certainly a lack of union of the muscular tissues and the deep fascias; the remedy is plainly that of securing perfect apposition of the edges of these tissues. Time is frequently, in an operation, a most important element, and there is no need of wasting it by passing a separate row of sutures in the peritoneum itself, as has been advocated and practiced in some of our neighboring cities. The peritoneum always unites, and does so in a very short time. As far as I know it has never failed to do so, excepting in those cases where the whole incision failed. The hernia is always found to have a covering of skin, superficial fascia, and peritoneum. It seems to me that a continuous catgut suture, of the muscular and deep fascia, is all that is needed beyond the usual all-the-way through suture. I can recall a case where the presence of a hernia, by demanding an operation for its closure, resulted in the death of the woman.

This city now contains a large number of women with fistulous tracts in their abdomens. Some of them have followed drainage, while others have been produced by abscesses rupturing through the incision, and the tract never closing again. The extra-peritoneal method of treating the pedicle in hysterectomy is a very frequent cause. The length of time it takes the clamp to come away is often so great as to leave an opening which constantly discharges pus, in small quantities it is true, but yet enough to be exceedingly annoying and uncomfortable. I have had two such fistulas following hysterectomy, and neither of them have I yet been able to cure; the one, however, now gives fair promise of soon closing. I have, fortunately, had no other fistula-tracks following my operations. One case, I know of, was a few years ago operated on for some pelvic trouble, and after a few weeks the patient was sent to her home with a drainage-tube (rubber, I think,) in her abdomen. The surgeon lost sight of her, and the tube being neglected soon became most foul. The case afterward drifted into one of our large general hospitals and there died. Another case was operated on for a pus-tube; the second tube and ovary being apparently healthy, were left *in situ*, but these afterward took on disease, and a second operation failed to remove it. A third operation was undertaken by another surgeon, with what result was never known but by a select few; certain it is that a fistula-track followed after a severe illness. The woman also finally found her way into one of the general hospitals and was miserable enough to die, if she did not do so; what finally became of her I do not know. A third case had one side of a double tubal trouble removed, and the drainage-track never closed. I saw this woman a year or more after the operation, on her death-bed. The track was discharging pus freely, and always had done so; before her death feces was also finding its way through the opening, a slough having evidently come away from the bowel. A fourth case, after everything else had been done without success, had a counter-opening made into the vagina by another surgeon into whose hands she had fallen. The operation also, unfortunately, opened the bladder so high up that it was impossible to repair it. She has now a vesico-vaginal fistula, in addition to her other troubles, and at last report was in a dying condition. And so I could go on with case after case, some as bad and some not so bad; but, at its best, a fistula is a most miserable complication, and too much attention can not be given to its prevention. If the drainage-tube is not responsible for the hernias, it certainly is for a large number of fistulas; and, although I am a firm believer in the great benefits to be derived from free drainage, I fully realize its disadvantages, and often wonder if it could not be done away with oftener than it is. The great prevention of the formation of these fistulas is to prevent abscesses forming and thus the necessity of their subsequent discharge; if they do form it is better to go boldly in and empty them at once, than to wait and have them open by a slow, tedious, and uncertain process, which may not be brought to an end before the patient is; the avoidance of the unnecessary use of the drainage-tube, and when it is used the most careful attention to its cleanliness, and its early withdrawal. I believe a permanent track results oftener from an unnecessarily prolonged use of the tube than from any other cause.

Fecal fistulas are not so common, and yet enough of them occur from time to time to be a warning of the danger of their production. When they do occur, they are usually so deeply seated and so bound around by inflammatory products, that they can not be reached; and if they are reached, as a rule, require one of the most dangerous and difficult operations in the whole range of abdominal surgery. I can recall a number of these accidents; one could not be reached after an extended trial, and the whole incision was closed up in order that the patient might die as quietly as possible; this she did not do, however, but lived in spite of everything, and the track afterward closed of its own accord. Another case required the most constant and careful irrigation, after an unsuccessful attempt had been made to reach it, to save the woman's life. And so they go. If an attempt is made to close them, a great risk is taken; if they are let alone and do not close spontaneously, the patient had better be dead. The usual cause, as far as I have been able to observe, is intestinal adhesions to diseased organs. Often after tearing a loop of gut loose, I have returned it in fear and trembling, lest a piece at the point of adhesion slough out and give me a fecal fistula. Prevention consists in the greatest care in tearing loose each adhesion, and a most careful attention to the after-treatment. When they occur, they are best left alone.

A continuance of pain, or the appearance of a pain not before present, following abdominal section is so common that every one engaged in this kind of surgery must have noted its frequency. This pain is usually not very severe, but is of a constant nagging character—such a one as to so constantly wear on a woman's nervous system, that it soon renders life a misery to herself and her a burden to every one around her. At times, however, it assumes a severe character and becomes almost unbearable. I have known of a large number of such cases, some of which required an operation for their relief. In two cases of this kind, the only lesion found was an adherent omentum to the abdominal incision, the freeing of which cured the pain. Many others are now going about, suffering as much as they did before the operation. Most of this pain is, I believe, due to adhesions formed between the omentum or intestines and raw surfaces left by the operation, and the subsequent dragging on these points. This would seem to be true, as most of the cases that I have known of and which were operated on, and the adhesions released, have been cured or nearly so. I also think that the adhesion in the original disease oftentimes causes most of the suffering; this is especially so in the pelvic cases. From these same adhesions we have sometimes an obstruction of the bowels, either at once, or later, after convalescing, and causing death in consequence. I can remember several cases of this kind, which could be explained in no other way, and, in fact, some of which were demonstrated to be so by post-mortem examinations. The remedy for their formation and all their attendant dangers and discomforts, is to keep the bowels moving, so they can have no chance of adhering. The best way of accomplishing this is by purgatives, and by the *non*-use of opium. Fortunately the indications for purgatives are so many and so constantly present, that they can almost always be used.

Edema of the lower extremities I have a number of times seen, sometimes only temporary, but at others of long enough duration and severity to be of considerable annoyance and worry to both patient and surgeon. In my own practice this has occurred several times, but has always eventually cleared up.

When every person about to undergo an abdominal operation must run the gauntlet of all these complications, as well as many more unmentioned, it becomes a serious matter in deciding for or against an operation. We have here more than the immediate risks to life to consider. We must query: If the patient has her present disease removed, will she be any better off, or may she not be the worse for the interference? At any rate, such a state of affairs should be a warning to inexperienced men, not to be misled by the brilliant reports seen in the journals and not to rush thoughtlessly into an operation, expecting to produce the same perfect results. They should know that, as a rule, only favorable cases are reported, and that men do not like to publish to the world their bad work or misfortunes. Abdominal surgery is by no means the simple, easy procedure some men would make us believe, and such an operation should never be undertaken, except after the most careful consideration of all the risks that must be run, the chances of benefit to the patient, and in the presence of actual demonstrable disease. Until the dark sides of abdominal work are well known to the profession at large, the *furor operandi*, which have been so justly complained of, will continue, and many women will succumb to the results of inexperience.

Selections.

A Case of Bursting of the Bladder. With Remarks.

BY DR. MARCELL HARTWIG, BUFFALO, N. Y.

BET. æt. 40, a strong man, was jammed in between two railroad cars on October 20, 1887. Both trochanters were caught, and, through the pressure, the man was rotated around the axis of his body, whereby his full bladder certainly suffered pressure. At the start, the right leg was very painful, while moved, in the hip joint, ditto the right sacroiliac joint and the right trochanter. The left trochanter was hardly sensitive. Two inches above the symphysis pubis was a hardly noticeable red streak on the skin, an abrasion close above the right trochanter. The perineum was slightly sensitive, and from the orifice of the penis a drop or two of blood was oozing. It soon appeared that the right hip was not seriously hurt, while the articulatio sacroiliaca was swelled, without dislocation. The interest of the case centered around the bladder. Since five o'clock in the evening till ten on the next morning, while using sixteen doses of ten drops chlorodyne each, he did not pass a single drop of water. I then introduced a Nelaton catheter No. 22 F., without trouble, but only a few drops of blood came. Even attaching a suction pump, only a couple of tablespoonfuls of blood appeared. The usual signs of peritonitis were wanting, the pain in the lower abdomen excepted. Percussion showed a dullness of the form of a bladder, reaching till to the middle between symphysis and navel. The space was oval and felt somewhat more resistent. Thus, either the bladder was distended with blood, or urine was accumulated between bladder, peritoneum and frontal wall of the abdomen, imitating the shape of the bladder. I decided the latter condition to prevail, assuming that the suction would have sufficed to force blood clots out and to draw urine, were there any in the bladder. I proposed to tap the dullness with Dieulafois' troicar. That was refused, and I had a chance to observe the forces of nature. Twenty-four hours later—that is, after forty-one hours—no urine yet. Silver catheter, well disinfected, of course, introduced and moved a little to dislodge blood clots. Nothing came but a teaspoonful of blood. Dullness reaches to the navel; shape of bladder. Next night, after at least fifty-three hours, he passed, repeatedly, urine, the dullness not diminishing. Even after eight days, *status quo*. The conclusion was sure that now, after no space existed in the prævesical space, the urine had to come the natural way. After eight days he was able to stand and to pass a glass of urine at once. If he then sat down on the edge of the bed for five minutes, he could pass again a glassful, a nice proof that during that time urine had leaked from the prævesical space into the bladder, because kidneys can not manufacture urine as fast as that. At the same time the dullness lowered two fingers' width. On October 30 he could pass no two portions any more. Dullness in the center between naval and symphysis. This makes us, of course, conclude that the rent in the bladder had closed. The first portion was every time more cloudy than the second, coinciding with the microscopical appearance of numerous resp; few leucocytes. The dullness lost, by and by, the oval shape and widened in the lower region, especially toward the left. On October 30 I noticed on the left trochanter a small sac, which seemed like a late burst of a subcutaneous vessel, but the distinct fluctuation roused already my suspicion to the question whether there was no urine in there. On November 1, the bag was already considerable, and I emptied it with the hollow needle, obtaining a pint, almost, of clear urine.

The dullness reached, on the left side, along the whole length of Poupart's ligament, till to the spina anterior superior ilei; the upper edge stood midway between the navel and symphysis pubis. Light urethritis. No erections. On November 3 I emptied again a glassful of urine from the sac on the trochanter. A test on gelatine, taken with all precaution, remained sterile, as after some time appeared. On November 15, the sac was emptied the last time. The urine appeared clear and not decomposed. On November 15, suddenly the right testicle swelled. Well-characterized epididymitis, lasting for six days. In the urine, which the man passed *per vias naturales*, there was sufficient pus, but I was not able to detect any gonococci, while the man denied of ever having had any gonorrhœa. The stream of urine is slightly thinned. This circumstance is probably explained by the fact that, right from the start, there was some hemorrhage in the perineum, the same having had a bluish hue. January 1, 1888, the man was well without further treatment.—*Buffalo Medical Journal.*

A Case of Hydated Cyst of the Liver.

BY PEARCE KINTZING, M.D., AND J. W. LORD, M.D., RESIDENT PHYSICIANS TO THE PRES. HOS., PHILA.

On December 9, 1887, Thomas H., an Englishman, aged twenty-one years, who had been in America three months, during which time he had worked on the Pennsylvania Railroad, was admitted to the house. He complained of sharp pain in the right costal and hypochondriac regions, and attributed it to a cold, the result of a severe wetting which he had received three days previous to admission. He had a hard, dry cough, pain on deep inspiration, and a temperature of 100.6°F.; pulse, 80; respirations, 30.

On auscultation, a moderately rough friction sound, synchronous with respiration, could be detected over a considerable area on the right side, and the area of dullness extended from the lower border of the ribs to the fourth intercostal space. Bulging was observed over the area indicated, but was most prominent from the fourth to the seventh ribs. No fremitus, skin and conjunctiva clear, constipation obstinate. Calomel in quarter-grain doses was administered hourly. A blister was applied, and by the evening of the second day the temperature had fallen to normal, where it remained until the sixth day, by which time pulse and respiration had also returned to normal. Between the sixth and the fourteenth days fever of intermittent type was present, and the 101° line was passed upon three evenings. Upon the fourteenth day aspiration was decided upon, and a hypodermic-syringeful of clear serum was removed, but two thrusts of a three-inch trocar failed to bring any liquid. The points selected were at the angle of the scapula. During this febrile period the pulse and respiration remained about normal, and after the fourteenth day the temperature fell to 97°, and ranged between 97° and 98° until the twenty-seventh day, when observations were discontinued for twelve days following. The patient then became moderately jaundiced; the urine contained bile-acids but no pigment. The temperature rose to 102.5° and the respiration to 40, but as each fell to normal on the following day, tapping was not resorted to, although dullness now extended from a hand's breadth below the lowest rib to the third interspace, and even to the second when the patient inclined forward. Constipation during this period was extreme, and the stools were exceedingly fœtid. On the forty-seventh day after admission the temperature rose from 98° to 101.5°, and aspiration was again resorted to, at the seventh interspace in the mid-axillary line. Nine fluid ounces of pus were removed, when the flow suddenly stopped. A four-inch trocar was reinserted, but failed to find any more liquid. After this operation both pulse and respiration fell to normal, and the temperature fell to 100°. Microscopic examination of pus removed revealed hooklets of Tænia echinococcus, pus-cells, compound granule cells, large cells containing oil globules, cholesterin crystals, and pigment granules. A diagnosis of echinococcus cyst was now evident, but before surgical interference could be resorted to the patient died.

At the post-mortem it was found that the liver was firmly attached to the diaphragm over its entire right lateral surface, by reason of perihepatitis, and the apex of the right lobe reached to the third interspace in the axillary line. There were no adhesions to the peritoneum elsewhere. The entire right lobe of the liver was converted into a purulent cyst, and was absolutely devoid of liver structure, only the much-thickened capsule remaining. The cyst was lined with an elastic, gelatinous membrane, four lines in thickness, striated and studded with opaque dots. It was not adherent to the capsule of the liver, and when a trocar was thrust through the liver capsule, the elastic cyst-wall was pushed before it, instead of being penetrated. From the interior of the cyst 107 fluid ounces of liquid which had undergone purulent degeneration were removed. Upon standing, the fluid separated into a supernatant liquid, greenish yellow in color, turbid and partially coagulable, and a sediment which has already been described. Three daughter-cysts were also found floating free in the liquid, of about the size of pigeon's eggs. These contained the clear liquid filled with scolices—no hooklets and no pus-cells—and these were pronounced by Dr. Joseph Leidy, Sr., the eminent authority upon parasites, after microscopic examination to be acephalocysts. The gall-bladder was filled with the same clear liquid, and was much distended; its duct was occluded. The stomach was pushed to the left parietal wall, and its axis was vertical. The two lower lobes of the right lung were collapsed and carnified. The upper lobe was crepitant. The plural sac contained a pint of serous effusion.—*N. Y. Med. Jour.*

The Employment of Tannin in Tuberculosis of the Bones and Articulations.

PROF. ANDREA SACCHARELLI, of Parma, calls attention to the effects which follow the employment of this remedy in the form of a dressing in tubercular lesions, basing his conclusions partly upon a series of experiments made upon animals inoculated with tuberculous matter, and partly upon his clinical results (*Journal de Medicine et de Chirurgic*, February, 1889). It has been utilized in various lesions, such as ostitis, white tumors, fistula, resections, etc., employed either in the form of a powder or in the form of a gauze soaked with an alcoholic solution of tannin. According to the author, this substance is a powerful aseptic and favors the reunion of wounds, while it has special anti-tubercular properties, since it is able to prevent the development of tuberculosis and even destroys tubercles when they already exist. He believes that it is without doubt better than iodoform, while being more powerful and free from danger. In many cases he has also combined the internal use with its external application. In this latter respect M. Raymond also believes that tannin taken internally in tuberculosis is quite comparable to the action of mercury in syphilis.

Dr. E. Houze, of the Hospital of St. Jean, Brussels, after having tried the tannin treatment on all his phthisical patients for the last year and eight months, states as the result of his observations that it gives excellent results in all stages of the disease, and especially in the condition where cavities exist. (*Lancet*, March 9, 1889.) Indeed, he has no hesitation in declaring that of all the different kinds of treatment for phthisis which he has tried this has given by far the most encouraging results. The dose he employs ordinarily is fifteen grains, which quantity is taken three times a day. It is, as a rule, well borne; where this is not so, it is ordered to be taken with meals. After the first few days the expectoration and the sweats diminish, the cough decreases, and in many cases the appetite undergoes a marked improvement. The majority of the patients suffered from some slight degree of constipation, though in some this feature was sufficiently marked to require treatment; while others again suffered from diarrhœa. The character of the expectoration changed for the better, the sputa becoming white and frothy instead of green and firm. In some cases the diminution of the expectoration was followed by increased dryness of the cough, so that the patients complained that it fatigued them more; this was easily remedied by prescribing a few spoonfuls of syrup of codeine. The physical signs underwent a remarkable change for the better, at least those depending on auscultation, moist râles giving place to dry bronchi, and large gurgling râles decreasing progressively until they gave place to mere blowing respiration. These changes were evidently due to the drying up of the cavities, in consequence of which the hectic present in many of the cases vanished, the patients increasing considerably in weight and gaining strength in a remarkable manner. The percussion signs were not found to undergo so marked a change as those dependent on auscultation, but even here some improvement could be detected. No bacteriological observations were made.

Letter from the Sandwich Islands—Causes of the Depopulation of these Islands.

To the Editor of the Medical Record:

SIR:—I send you a few hastily written notes of my observations of matters medical in the Sandwich Islands, which I trust may prove of interest to your readers.

From a sociological, as well as from a strictly medical standpoint, the Sandwich Islands present many features of interest to the observer. Situated in the midst of the ocean, continually swept by balmy breezes, with a tropical luxuriance of vegetation, these islands have been termed the "Paradise of the Pacific." They are inhabited by a race *facile princeps* among the Polynesian races in point of physical development, intelligence, and modes of living, with a delightful climate, a productive soil, sustaining no hardships, and yet dying at a most rapid rate. At the time of Captain Cook's visit, a little over a century ago, the population was estimated at not less than four hundred thousand, but the contact of civilization has acted as a blight upon the Hawaiian people; under its withering influence the native population has dwindled down by tens of thousands each decade, until to-day it does not exceed thirty-five thousand.

It would be interesting to trace the causes which have led to the depopulation of these islands. No unfavorable influence of soil, climate or hardship can be invoked in explanation of the decay and death of the native race. It is not the outcome of a contest between a savage and a civilized race, in which the weaker succumbs to the stronger, as in the case of the North American Indians. Nor does it seem to be a case of the "survival of the fittest," since there is no competitive struggle for subsistence in a land where nature is so kind and bountiful, and furnishes an abundance of easily procured food, more than sufficient for the needs of all. Under the same conditions which have led to the depletion of the Hawaiian race and which seem to threaten its ultimate extinction, the foreign races that have settled here have taken root and flourished, and now virtually "occupy the land."

In endeavoring to appreciate the influences which have operated as factors in this extraordinary depletion of the population, the physiological peculiarities of the natives should perhaps be considered among the contributing causes. The Hawaiian presents a curious combination of strength and weakness, or, rather, of seeming vigor masking actual effeminacy. He has a fine frame, well nourished the embodiment, to all appearance, of bodily vigor—and yet his physical fibre is essentially weak and he is endowed with but a feeble vital tenacity. He succumbs to the shock of hardships or trivial ailments which would not seriously affect a white man. When he becomes sick he is not buoyed up with a desire and determination to live—he simply surrenders to fate and lies down to die. He takes life gayly and luxuriates in its enjoyment. He accepts death with the same cheerful alacrity. In fact, he dies often from no apparent cause other than an apathetic indifference to life.

Many curious cases might be cited illustrating the extraordinary influence of the mind over the body and proving that psychology may be a powerful agency of death as well as a means of cure. The kahuna, or "medicine man," is invested by traditional superstition with supernatural powers which entirely overshadow those attributed to his civilized congener, "the faith-cure man." He holds in his hands the issus not only of life but of death, and does things undreamed of in the "Christian science" philosophy. When a native is ill he is persuaded that his sickness is due to the agency of some demon, or that he is being "prayed to death" by a kahuna employed by his enemy. Unless he can secure the interposition of a more powerful kahuna to break the spell, he gives up hope and the ghost soon afterward, and dies, often with no evidences of physical disease which the most expert diagnostician can discover.

The demographic effects of introduced diseases in a virgin soil can nowhere better be studied, and they exhibit facts of the most remarkable interest. The natives have proven strangely susceptible to the diseases of civilized life, and trifling ailments, such as measles, whooping-cough, etc., acquire, by their transplantation into this soil, all the virulence of a fatal pestilence. Measles and whooping-cough, introduced in 1849, almost decimated the population—the mortality was excessive, almost every case terminating fatally. The ravages of smallpox, introduced in 1853, were none the less frightful. In the island of Oahu over fifteen thousand died, and the Marshal of the islands informed me that he superintended the burial of ten thousand victims of this disease in Honolulu alone—more than one-half of its entire population. The rapid spread and the excessive mortality of these diseases were attributed to the intimate social relations of the natives, their disregard of precautions, and their free use of cold water on the first accession of febrile symptoms. It is one of the characteristics of the Hawaiian that the most disgusting disease excites no sentiment of repulsion or suggests the separation or isolation of the sick.

The most important agency in the depopulation of the islands has been attributed to syphilis, which was introduced by Capt. Cook and his men in 1778. The licentious habits and promiscuous intercourse of the inhabitants caused it to spread like wildfire through the islands. In explanation of this rapid and universal diffusion of a disease strictly venereal, the "free and easy" and ultra-communistic customs of the social life of that period may be cited. A round of visiting was the chief diversion of the native; and the laws of Hawaiian hospitality required that the host should not only furnish his guest with food and lodging, but provide for his entertainment the women of his family. This was the universal custom, the neglect of which was regarded as a most unpardonable breach of etiquette. It is said that one of the severest trials of the early missionaries in their tours through the islands, scattering the seeds of Christianity, was the constant obtrusion of this St. Anthony form of temptation.

In a recent paper read before the "Honolulu Social Science

Association," November, 1888, the Rev. S. E. Bishop thus comments upon this point: "It may be said in general that chastity had absolutely no recognition. It was simply a thing unknown and unthought of as a virtue in the old domestic life of Hawaii. A woman who withheld herself was counted sour and ungracious. This did not exclude more or less of marital proprietorship involving an invasion of the husband's right in enjoying his property without his consent. There was no impurity in it any more than among brute animals. There was, however, a salutary limitation of some importance in a frequent stringent guarding of early virginity. Young maidens were quite commonly put under taboo for first use by the chief, after possession by whom all restriction ceased. No sense of a sacredness in chastity seems to have been involved in this, nor any sense of profanation in the contrary. It was only the thought of a special choiceness of an article that was fresh and unused. In the tremendous disturbances of life ensuing upon the advent of the white man, even this solitary restriction perished."

The effects of syphilis upon a race hitherto free from sexual diseases were simply murderous—multitudes perished, and those who escaped death were left with shattered frames and enfeebled constitutions which made them an easy prey to maladies of a trifling character. In addition to the original "stocking" of the island with syphilis by Captain Cook, a fresh increment of infectious material was from time to time added by the hordes of reckless sailors from the whaling vessels which were accustomed to visit the islands for recruiting purposes. No other race in the world, perhaps, has been so completely saturated with syphilis as the Hawaiian, and the syphilographer has here the opportunity of studying the strange mutation which the syphilitic virus undergoes in the transplantation to a virgin soil, and by which it acquires an added virulence and a greater potentiality for mischief.

He has also here an admirable field for studying the effects of hereditary immunity, which has resulted in the production of a much milder form of the disease in the course of three or four generations. At the present day syphilis in the Sandwich Islands is comparatively a benign disease, and furnishes but a small contingent to the sum of mortality. Almost all of the cases that came under my observation at the Queen's Hospital, in the Honolulu Dispensary, and elsewhere, were of the mildest type, the lesions being superficial and comparatively insignificant. Not only has the disease moderated in severity, but according to the testimony of numerous physicians with whom I conversed, it has materially decreased in frequency.

Especially was I struck with the absence of notable evidence of hereditary syphilis among the younger population. Although I was constantly on the lookout for indications of hereditary taint, nowhere did I observe the characteristic impress of inherited disease, except among the lepers of Molokai. The comparative rarity of hereditary transmission may be explained by the fact that the Hawaiians of to-day are a sterile race. In some of the districts the percentage of births does not exceed 2 per 1,000, instead of 28 per 1,000, as it should be to balance the mortality rate. This is in striking contrast with the prolificness which distinguished the Hawaiian families in the olden times. What measures of influence syphilis has exerted in sapping the procreative powers of the people can not be definitely determined. It is a singular fact that the loss of procreative capacity seems to be limited to the male, and is attributed to early indulgence in sexual excesses. Native women united to foreigners commonly bring forth a numerous progeny.

The fact that so few living children are born to Hawaiian families is probably due not so much to the impotence of the male as to the common practice of abortion. Before the advent of Christianity infanticide was the bane of the race. In the olden times the parents were considered the arbiters of the lives of their offspring, and the practice of strangling or burying alive their infants carried with it no conception of criminality. Thanks to the efforts of the missionaries, they have abandoned this practice, and now they resort to methods more in accordance with civilized customs. Instead of granting the product of conception a reprieve of nine months, they hasten its execution. One of the first lessons a Hawaiian girl learns on arriving at puberty is the expulsion of the fœtus. An interesting chapter might be written upon the various methods and agencies employed for this purpose; some of them are quite unique, and show the inventive genius of the native—such as stuffing the vagina with leaves or foreign substances of an extremely irritant nature. One of the most effective and commonly employed is drinking a decoction made from the roots of the pandanus tree.

In this connection it may be said that, barring venereal diseases, the Hawaiian women are singularly free from the vast complexity and variety of uterine troubles with which their more civilized sisters are afflicted. As I learned from Dr. Trousseau, to whose extensive knowledge and experience of the Hawaiian people I am indebted for many facts of interest, native women seldom suffer from uterine displacements, lacerations, leucorrhœa, etc. This is somewhat surprising, in view of the fact that active horesback exercise is almost universally indulged in, the women always riding a-straddle, man-fashion.

The process of parturition is attended with little suffering, and is usually of short duration. The presence of a doctor is rarely required, and then only in the presence of some grave complication. Women are confined usually in a sitting posture, the perineum resting upon a low, somewhat conical support. If the labor is not promptly accomplished the process is expedited by a native woman, who kneels or sits behind the sufferer, and, encircling her arms around the abdomen, gives material assistance by more or less judicious pressure. The after-birth is expelled in the same manner, which rivals the Credé method of expression in ease and certainty. The woman usually gets about the same day, her first act being to wash the clothing soiled by her confinement; the accomplishment of this duty is, to the native mind, invested with something of the sacredness of superstition.—*The Medical Record.*

Chicago Pathological Society.

PRESIDENT I. N. DANFORTH, M.D., IN THE CHAIR.

DR. J. R. KOEHN read a paper entitled

ANTIPYRIN IN A CASE OF TYPHOID FEVER.

THE patient was Mr. G., 29 years of age, parents, brothers and sisters all living and healthy. He was called to see the patient on January 6th. When 16 years of age he accidentally received a gunshot wound in the left side of the abdomen just below the spleen, exposing the gut and passing out at the back. The wound entirely healed, causing only an occasional pain. Patient had always been healthy up to the time of the accident and since, until New Year's Day, when he was attacked with typhoid. Dr.

Koehn ordered antipyrin to be given in ten-grain doses every three hours; laudanum in ten-drop doses, to be given in case of vomiting. A diet of liquid food was prescribed, consisting of beef tea and malted milk. The night following the 12th he was called to see the patient post-haste. He found him suffering intense pain in both legs, but more in the left. Patient said he felt his feet getting cold and going to sleep, this feeling gradually extending to the knee-joint. Rubbing and turpentine fomentations soon restored the natural feeling to the right leg and foot, but the left side did not respond at all. He had a prickling sensation in the sole of the foot and sharp, shooting pain in the calf of the leg. This was so intense that a hypodermic of ⅙ grain of morphine had not the slightest effect. The next morning temperature was a little over normal; pulse, 104; heart sounds perfect; pain still intense. Inspection of the limb showed the color of the toes and sole of the foot to be of a dead white, dorsal surface of a mottled blue; no swelling. Patient said he felt as though the sole of his foot was being torn off; sensation impaired half way up the knee. Motor power almost entirely destroyed in the ankle and foot. Evening temperature on the 14th day was 100°; pulse, 110. Since the morning of the 13th the leg had been elevated on a pillow and hot fomentations applied. The foot and ankle half way up to the knee had now assumed a dull bluish red color; there was crepitation of emphysema in some parts, swelling increasing rapidly. All the signs of moist gangrene were present. The next day continuation of symptoms; temperature, 103°; pulse, 130, small and thready. Internal remedies had been administered from the onset of the complication. The patient was gradually growing worse. On the 19th day the temperature was 103.5°; pulse, 125; patient delirious from over-stimulation. Chloral hydrate was ordered in 15-grain doses. This day the case passed out of Dr. Koehn's hands. Dr. C. Fenger, who was called in on the 22d day, found an imperfect line of demarkation, and about the condition that was present since the third day of the complication.

Auscultation gave a whizzing sound on the left side over the femoral artery, which was not heard on the right side, and resembled the aneurismal thrill. Amputation was performed at the middle third of the thigh on the afternoon of the 23d day. The arteries upon being cut and tied did not exhibit the characteristic jerking with each pulsation, but were more of a pipe-stem consistency. Patient gradually grew weaker, and died twenty-four hours after the operation.

Dr. Koehn, in summing up, said: In searching for the cause of this complication we meet with great difficulties, as a post-mortem examination could not be obtained, and the condition of the internal organs, especially the heart, is unknown. The history of the case is free from any syphilitic taint. The remaining causes or theories that might be advanced are the following: The existence of an arterial disease described by Moxon as "inflammatory mollities," the occurrence of swelling and softening of the arterial tunics in circumscribed spots, which become flabby and elastic. He believes that this condition depends on a peculiar state of the system, and is found in young hard-working men; or, the existence of "endarteris deformans" (atheroma), which is always caused by over-exertion. The non-elastic state of the arteries in the stump shows that the large vessels above Poupart's ligament must have been diseased, embolic plugging occurring in more peripheral vessels, as a result of detached fibrinous clots and atheromatous deposits being washed away.

It is not impossible that one of these conditions of the circulatory system may have existed prior to the attack of the fever; the typhoid state causing impure blood, retarding the flow through the capillaries, increasing the tension of the arterial system, and thus favoring the development of the complication which caused such dire results.

Antipyrin in this case acted like magic in reducing temperature and giving the patient relief. But in causing such a profound impression on the system there is reason to believe that it also produces some important changes. Although reports in regard to serious organic changes are mostly negative, Professor Tullio reports eight cases of articular rheumatism in which its action developed serious pericarditis, four others endo-pericarditis with subsequent mitral trouble. In another case transient albuminuria occurred, which ceased when the administration of the drug was discontinued.

Dr. C. D. Wescott read a paper, entitled

THE ACCIDENTAL COMPLICATIONS OF TYPHOID FEVER,

in which he quoted considerably from Dr. Bayard Holmes' article on "Secondary Mixed Infection in Typhoid Fever." (See *The Journal and Examiner*, August, 1888.)

In speaking of the treatment of typhoid fever, Dr. Wescott said: The discovery of the specific microbe of typhoid fever has not as yet made it possible to prevent the disease, but, in the light of the most recent studies, it would seem that typhoid fever, pure and simple, requires little more than careful management, and that all of the real danger to our patients is due to the secondary infections, which, possibly, we can prevent when we fully understand them. If this can be done, may we not make typhoid fever, if not a preventable, a comparatively non-fatal disease?

The treatment, *par excellence*, of the complications of typhoid is most certainly preventive, and in addition to keeping our patient as quiet and comfortable as possible, and sustaining him with proper nourishment in proper amount and at proper intervals, I think we should make him as aseptic as possible both inside and out. *Inside* by means of the intestinal antiseptics, naphthol and naphthaline, with occasional salines, unless there is exhausting diarrhœa; *externally* by means of antiseptic baths and a clean environment.

I also believe that we can do a great deal to maintain the condition of the blood and to conserve the flagging strength by the judicious administration, from the beginning, of such tonics as arseniate of strychnia and digitaline.

In regard to antipyretics, I believe the safest we have, when their administration is understood, are *aconitine* and *veratrine*; but I do not use the chemical antipyretics myself if I can keep my patient's temperature below 103° by resorting to tepid sponging. I certainly am not in favor of the continued and routine use of antipyrin, and believe that the chemical antipyretics, as a class, do not shorten nor materially modify the course of typhoid fever, or its intestinal lesion, and I think the largest part of the most recent evidence fully confirms me in my opinion.

I do not think, however, that the disastrous termination of Dr. Koehn's case was due to the fact that he gave his patient antipyrin. It was probably a case of secondary infection causing thrombus, which resulted in gangrene of the leg, and the result was inevitable.

Professor A. E. Hoadly said the case reported by Dr. Koehn was one of remarkable interest; but he could not see how we could consider the condition of gangrene a complication of typhoid fever any more than any other disease. Some four weeks ago he had an elderly lady patient, who died from fatty degeneration of the heart, and the same train of symptoms were present in that case as in the one cited with moist gangrene. From the time of the onset of the pain which marked the time of the occlusion of the arteries, she lived about ten or twelve days, and he regarded it as a case of embolism. He was much pleased with Dr. Wescott's review of the complications, and the subject was one which would give the profession, when thoroughly understood, a new impetus and valuable addition to the treatment of typhoid fever. In this connection he would cite a complication of the disease which can just as well be denominated such as the case of gangrene of the leg which had been referred to.

A child 11 years of age was attacked with typhoid fever on the 28th of December last. About the 25th of January there was some trouble of the hip-joint, which brought on neuromuscular phenomena, fixation with flexion and adduction. The child was convalescing, and when sitting in a chair the adduction was well marked. The flexion, pain and tenderness increased, and counter-irritation was applied. Anodynes were given; the child had developed a high temperature. He was called in consultation to see what could be done for the joint disease. On examination he found the hip rounded, tense and painful; temperature of 103.5°; pulse, 130 to 135. He concluded that there was suppuration of the hip-joint. He gave an anæsthetic for the purpose of correcting the position of the joint. He found it was luxated. He reduced the dislocation, applied extension, and the deformity largely disappeared. There was some effusion in the joint. He waited a few days for more positive symptoms before aspirating or operating, but the temperature came down the second day to about normal. He then lightened up the weight, and adduction and dislocation again took place in spite of everything. He again administered an anæsthetic, and reduced the dislocation. He then applied a heavier weight and kept it on for a couple of weeks. The child is now sitting up, moving about, perfectly comfortable and straight. There is no swelling, no tenderness, but a moderate amount of flexion. This patient practically recovered in five weeks.—*Chicago Med. Jour. and Examiner.*

Failure of the Heart in Valvular Disease and its Treatment.

THE writer quotes frequently from a recent article by J. Mitchell Bruce. When a patient with palpitation, dyspnœa, cough and threatening dropsy presents himself for treatment, he doubts "whether we are always careful to put the question to ourselves, What has happened to this man that he should come to me with these symptoms after twenty years of freedom from suffering since the original rheumatic endocarditis? Time was when we were satisfied in such a case with the diagnosis, mitral incompetence. We should now consider this diagnosis as insufficient, and would complete it by saying, mitral incompetence with cardiac failure." He ventures to say that "this diagnosis is still short of the full truth," and that "when we proceed to offer a prognosis based on such a conclusion only, and to apply treatment, we proceed on insufficient information. We must first determine the *cause of the failure*, why the heart has broken down, whether from muscular strain, or nervous exhaustion, or alcohol, or other discoverable cause." He maintains that until this point is satisfactorily settled we are not justified in offering a forecast or ordering a therapeutical course.

Dr. Bruce next proceeds to consider the most frequent causes of broken compensation. According to him they may be described as follows: 1. Muscular overwork. 2. Nervous causes, such as the depressing emotions of fear, grief, distress and anxiety. Worry, here as elsewhere, is potent for much mischief. Nervous excitement of a pleasurable kind may also work evil. 3. Imperfect blood supply to the heart. This may result from general hæmatic impoverishment, or from a diseased state of the coronary arteries. 4. Intercurrent diseases, among which rheumatism and pulmonary mischief are most to be dreaded. 5. Causes peculiar to women, such as pregnancy, confinement, protracted lactation, the climacteric, or even difficult menstruation. 6. The every-day use of tea, coffee, tobacco, or alcohol, which act, according to Dr. Bruce, as cardiac poisons. 7. Increase of the valvular lesion, due to endocarditus, rupture of a diseased valve, etc. 8. The advent of what may be called the "limit of compensation." By this is meant the limit that is placed on life and health by the occurrence of secondary changes in the lungs, liver, kidneys and, indeed, in the cardiac wall itself. Cardiac dropsy is finally developed. Judicious treatment may "again and again secure for a time a fresh accommodation, a new adjustment of the physiological balance; but the end can not be indefinitely averted—the limit of compensation is finally reached."—*Editorial, Med. Record*, March 17.

Philadelphia Neurological Society.

DR. S. SOLIS-COHEN read the notes of a case of

OBSTINATE SCIATICA CURED BY DEEP INJECTIONS OF OSMIC ACID AFTER FAILURE OF NERVE-STRETCHING AND OTHER MEASURES.

The method of treating sciatica by deep injections of a solution of osmic acid is so well known that the present case is reported only on account of its peculiar therapeutic history previous to the resort to the agent in question. Nearly every other medicinal and surgical means known had been tried faithfully, but without good result. The details of the case are given merely to show that osmic acid was really the curative agent.

George D., brakeman, æt. forty-five, was admitted to the Department of Clinical Medicine of the Philadelphia Polyclinic, March 24, 1888. For twenty years the patient had had more or less pain in the lumbar region, of gradual development, attributed by him to the fall of a log upon his back while engaged in transport duty during the war. About thirteen months ago he began to feel pain in the right hip, extending along the course of the sciatic nerve to the heel. The pain was constant with paroxysms of aggravation, very frequently preventing him from walking or even standing erect. Sleep was continually disturbed. He had been under treatment first in the department for nervous diseases, where the diagnosis of sciatica was made, and then in the surgical department for about a year; having been subjected to the influence of a number of medicaments, including, among many others, arsenic, potassium iodide, antipyrine, and antifebrin; injections of atropine, morphine and theine; electrical treatment had been employed; and, among surgical procedures, blistering, nerve-stretching by elevating the limb during ether-anæsthesia, and, finally, nerve-stretching after incision and exposure.

The latter operation was performed February 21, 1888. Immediately after the operation slight relief was experienced, although pain below the knee continued, and with the return of the power of motion in the limb, pain recurred as violent as ever; and had continued without intermission for about two weeks, except when the patient was under the influence of hypodermatic injections of morphine, without which he could not obtain sleep. He was then transferred to the general medical clinic. Salol being then under investigation, especially as to its analgesic properties, was prescribed tentatively in doses of about thirty to forty grains per diem. It gave relief, but not enough to warrant the hope of permanent good from its continued administration.

March 29th. An injection of ten minims of a one per cent. solution of osmic acid was made deeply into the thigh in the neighborhood of the point of emergence of the sciatic nerve, just above the cicatrix of the incision for nerve-stretching. On each of the two succeeding days, fifteen minims were injected. Improvement now began to be manifested, although the pain continued to disturb sleep. Tri-weekly injections of twenty minims each were made during the next two weeks; a pill of morphine, belladonna, and quinine being given when necessary to produce sleep.

April 11th. The patient was improved sufficiently to sleep without the pill.

19th. Improvement had steadily progressed, so that only a cane was used instead of crutches for walking. An injection of twenty minims was made higher in the buttock near the sciatic notch, pain being felt more especially at that point. Patient discharged from hospital.

May 17th. The patient returned, stating that he still had pain, coming on at twelve or one o'clock at night and lasting until morning. He was free from pain during the day and could walk readily with the aid of a cane. An injection of thirty minims was made at the same point as previous injection.

January 1, 1889. The patient being sent for, reports that after the last injection he was so sore that he could not sleep that night. The soreness gradually abated, and two weeks later he was able to sleep without interruption during the whole night. Since then he has had no pain of any account. There is some weakness of the leg below the knee, and some impairment in the movement of the foot, but not enough to interfere with locomotion with the aid of a cane. He considers himself well.

Dr. J. Madison Taylor then called attention to

SOME POINTS IN THE TREATMENT OF SCIATIC NEURITIS. MASSAGE AND INUNCTION WITH A GLASS ROD.

The remarks were mainly intended to call attention to a simple device which he has used with success in the treatment of sciatic neuritis.

Probably the best treatment for sciatica is absolute rest. This, coupled with the use of continued cold, with galvanism, the repeated use of the actual cautery, or blisters, usually does much good. But oftentimes more is needed, in the shape of regulated exercise, passive exercise of the affected limb; in short, overstretching of the nerve by forced extension and flexion by a skilled manipulator, deep massage, and the like. These last seem often to do as much or more than the more radical measures. but require the services of an experienced assistant, which many can not afford.

A year or two ago a patient, suffering from an obstinate form of syphilis, which resisted treatment at the best hands in this country, went abroad and got practically well in the hands of a clever physician in Germany, by the use of our ancient ally, mercurial ointment, applied in a very novel and effective manner. This consisted of a glass rod, the size of a section of broom-handle two feet long, on which ointment was smeared, and thence slowly and firmly rubbed into the skin. This combined the inunctions which could thus be made very thorough and systematic, with deep massage of the tissues. It certainly seemed to effect a more thorough introduction of the drug into the circulation, for the ointment was thus made to entirely disappear into the skin. The firm, slow pressure thus exerted must have an immensely stimulating effect on the muscles, nerve sheaths, etc., as well as on the absorbents, and is of itself an excellent tonic. This method he has not yet been able to test thoroughly in cases of syphilis, but he confidently recommends it as offering great possibilities of rapidly impressing the system with mercury.

Having a patient suffering from chronic sciatic neuritis, on whom the skill of several specialists had been wrought in vain, he determined to apply this same method of treatment. He used an ointment of mercury, belladonna and iodine, applied on a glass rod, for fifteen minutes at a time. Very prompt relief from pain was felt. Later he resorted to the use of the rod without the ointment, and with apparently equally good results. In a short time, two or three weeks, his case was practically cured. Since then he has used this method in many cases, usually in the hands of the patient himself—a most convenient plan. Its use is followed by a marked sensation of warmth and comfort. In one case, that of a gentleman who was obliged frequently to ride on horseback to his business out of town, the pain in both legs became intense at three or four o'clock in the morning, keeping him awake thereafter. Nothing so relieved this as ten minutes' deep massage with the rod. In a month pain which had resisted remedies for a year had gone.—*The Polyclinic.*

Obstetrics.

PLACENTA PRÆVIA, WITH SPONTANEOUS ARREST OF HEMORRHAGE.

In view of the great mortality attending placenta prævia, I take the liberty of presenting the following unique case, as I have no knowledge of a similar one. I was called in haste on the night of December 9th to see Mrs. K., twenty-three years of age. Pregnant about seven and one-half months with her third child, she had been suddenly awakened from sleep by a profuse hemorrhage, which had ceased before I arrived. My suspicions of the cause of the flooding were that it was from an abnormal position of the placenta, and this view was confirmed by exmination, as I found that peculiar doughy feeling imparted to the touch that is so indicative of trouble ahead. I advised them of future floodings; and, as she was some four miles from a physician, with roads that are almost impassable at this season of the year, I was very anxiouson her account. Again, on the night of December 21st, there was another serious hemorrhage. The case now looked serious, and I asked to have my friend Dr. Murray, of Van Etten, see her with regard to the advisability of inducing labor. We concluded to hold on for a short time and await results. I was again summoned on the night of January 2d, as labor pains had commenced, and with them, as I had anticipated, flooding. Upon my arrival, I found the child in the hands of the nurse; the mother weak, but in fair condition.

Upon inquiry I found that with the first appearance of pains there was a severe flooding, which stopped, however, after a strong contraction. Then the question was, what was the cause of its sudden stopping? On further inquiry I soon found out. The child was born feet first. The contraction had forced it down and separated the placenta on one side of the uterine neck, and thereby made an efficient tampon. The case, of course, after that time, presented nothing of interest, except that the nurse was fortunate enough to save it as well as the mother. Here is a case in which an uncommon presentation, to say the least, saved the woman's life.—*The Medical Record.*

MALE STERILITY AND GYNÆCOLOGY.

Dr. Fuerbringer, of Berlin, has written some important observations on this subject in the *Deutsche Med. Wochenschrift*, No. 28, 1888. He believes that sterility in the male is far more frequently the cause of barren marriages than is generally believed to be the case. Aspermatismus is associated with complete impotence, but azoospermia, or absence of spermatozoa in the semen, a condition by no means rare, may exist with perfect potency, and on that account is very easily overlooked. With few exceptions, azoospermia is caused by obliteration of part of the seminal ducts. This condition is generally caused by double gonorrhœal epididymitis, or inflammation of the vas. After that malady the chances are, Dr. Fuerbringer has calculated, nine to one that azoospermia will follow. Prognosis appears to be hopeless when the condition in question is not discovered till three or four months after the onset of the local inflammation. The chief importance of the management of the case lies in accurate diagnosis. True aspermatism is traced by Dr. Fuerbringer to arrested development of the ejaculatory ducts. He declares that in several cases of sterile marriages under his own observation the unfortunate wife had been sent from physician to physician, or from hospital to hospital, and her cervix divided or her endometrium scraped, until a glance at the microscope proved that nothing was wanting to insure the blessing of children, excepting spermatozoa. Dr. Fuerbringer's observations are worthy of consideration. No doubt the increase of temperance involves the relatively greater frequency of those forms of gonorrhœa where the early symptoms are very mild. Hence the first stages may now be as much neglected by the patient as they have ever been wont to neglect later stages. The more a case of gonorrhœa is neglected, the greater will be the chance of serious secondary complications.—*British Med. Jour.*

SYPHILITIC DISEASE OF THE CERVIX UTERI.

Dr. E. Rode, of Christiana, has observed three cases of ulcerating gummata of the vaginal portion of the cervix. They appeared from ten to twelve years after infection. In all these cases there was extensive œdema of the pelvic connective tissue. Diagnosis was based upon the distinct history of syphilis, which was readily obtained from the patient. There were, moreover, no symptoms of local cancer, tuberculosis, or simple erosion. The patients all recovered rapidly after the administration of iodide of potassium. No local treatment beyond simple cleanliness was thought desirable. Dr. Rode's experiences are of considerable interest. A good monograph on the ulcers of the uterus, written by a recognized authority, would prove of great utility to practitioners and specialists. The nature of so-called "ulceration" of the cervix and its innocuous character have been proved. The "ulcer" is hardly even an erosion; it is rather the replacement of the natural squamous epithelium of the outer part of the cervix by a layer of the columnar epithelium proper to the cervical canal. The severe symptoms once attributed to "ulcerated womb" are due to totally different causes. Nevertheless, there are such things as ulcers of the cervix, due to cancer frequently, to syphilis occasionally, to tubercle rarely. The practitioner, recognizing the truth that a formidable-looking erosion is of little or no clinical import, must take care not to mistake an incipient true ulcer for that relatively harmless pathological condition.—*British Med. Jour.*, February 16, 1889.

ERYSIPELAS AND MEASLES COMPLICATING PREGNANCY AND PARTURITION.

Cohn (*Centralblatt für Gynäkologie*, No. 48, 1888,) reports a case of erysipelas upon the face and head complicating pregnancy at eight months. Premature labor ensued; the fœtus exhibited upon the corresponding portions of the head and face an œdematous, deep red swelling which gradually faded, followed by desquamation. Examination of these infiltrated tissues for erysipelas cocci gave negative results. The child died at three weeks; the cause of death was found to be multiple abscess in the kidneys and purulent cystitis; the other organs were healthy. The mother recovered.

[The editor recalls a case of erysipelas of the face and head, with premature birth, the fœtus bore no visible mark of infection, the skin was normal in appearance. Prolonged cellulitis in the mother's pelvis resulted. The fœtus died soon after birth. Runge, Kaltenbach and Stratz have reported cases of maternal erysipelas manifested in the fœtus by tardy desquamation. The interest in Cohn's case lies in the presence of the exanthem at birth.]'

Schramm (*Ibid*) reports a case of measles at eight months' pregnancy; premature labor resulted, the child dying soon after birth; no evidence of the communication of disease from mother to child existed. The mother recovered after a severe illness; purulent otitis being a sequela of measles.—*The American Journal of the Medical Sciences.*

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Erysipelas and Puerperal Fever.

BY ROBERT T. WILSON, M.D., OF BALTIMORE,

GYNECOLOGIST TO THE UNION PROTESTANT INFIRMARY; ASSISTANT SURGEON TO THE HOSPITAL FOR THE WOMEN OF MARYLAND.

Read before the Gynecological and Obstetrical Society of Baltimore, February 12, 1889.

THE more the study of infectious diseases rules the medicine of the present time, the more our interest is directed toward the relation which the individual diseases bear to each other. Among the infectious diseases which, according to the old ideas, are said to stand in a changeable relation to each other, are erysipelas and puerperal fever. The endeavor has been made to prove clinically the identity of both diseases by pointing to the fact that they appear simultaneously, and still further by showing that puerperal fever is said to be engendered by erysipelas, and *vice versa*, in the case of lying-in women. The views of the identity of both forms of disease are especially furthered by the opinion of Virchow that, anatomically considered, the course of certain forms of puerperal infectious piseases, especially in the cellular tissues of the pelvis, resemble, or indeed are the same as in erysipelas. There are statements enough in existence which must make us cautious in our practice, but which are always being opposed by a number of observers, and these, though widely differing, assist in proving that there is a connection between erysipelas and septic infection. This subject which has been treated in a great variety of ways, has made great progress in recent years through the fact that Volkmann (Pitha—Billroth's Chirurgie, Erysipelas) lays stress upon the point that erysipelas as a disease, *sui generis*, must be separated just here in the puerperium from the phlegmonous conditions—a view which has already been expressed by others (Hirsch). Hugenberger, from his experience, has endeavored to show that erysipelas in the puerperium only appeared as a dangerous complication and had nothing to do with puerperal fever. We find cases on record in which erysipelas appeared to an alarming extent in lying-in women as well as in other patients—so-called *noso comial* erysipelas; and further that septicæmic conditions and pyæmia have been engendered from lying-in women with erysipelas, and *vice versa;* from such lying in women erysipelas has occurred with other sick persons or with well persons—physicians, nurses, etc.

After the appearance of Hugenberger's communications, A. Gusserow, in the spring of 1879, had under his care a large number of erysipelas cases with lying-in women, while at the same time many cases of puerperal fever appeared in the obstetrical ward of the Charité Hospital. From the course of the cases of noso-comial erysipelas (says Gusserow), if we are willing thus to designate the coincidence of nine cases of genuine erysipelas, he (Gusserow) was thoroughly convinced that there existed no connection between puerperal sepsis and erysipelas. The discovery of Fehleisen has made an epoch in the study of erysipelas, and it involuntarily recalls to our recollection (says Gusserow), the question how far erysipelas stands in connection with septic infection in the puerperium. Since through the erysipelas coccus (says Gusserow), the specific principle of the erysipelas, the peculiarity of the disease has been so beautifully proven, it seems to me (says Gusserow) that now is the time to emphasize again, from a clinical standpoint, the individuality of erysipelas in the puerperium, and to endeavor to prove that this disease has nothing in common with puerperal sepsis (*Archiv. f. Gynäk.*, vol. xxiv., part 2). Medical literature contains a sufficient number of cases with observations on the course of erysipelas in pregnant women to substantiate this view.

If erysipelas could be easily produced from a lying-in woman who has puerperal fever, the number of observations ought to be very large. But in the literature of this subject the cases on record are by no means large, and those which do exist admit of the supposition that they are not genuine erysipelas, but phlegmonous inflammation whose connection with sepsis is known *in those cases* (says Gusserow). Puerperal fever, puerperal septicæmia, may be endemic or epidemic. As the symptoms of the affection vary infinitely, so may the epidemics in their severity. Since the first epidemic at the Hotel-Dieu, recorded by Mauriceau and Lamotte, 1664, hardly a year has passed without our being able to refer to an epidemic at one or another place in the different parts of the world. While all authorities agree in regard to the application of the term puerperal fever, the theories of its origin have been innumerable, and to-day there are questions concerning it which it remains for the future to decide. The earliest theory was based on the idea of retention of the lochia, with decomposition of remnants of placenta. This theory started with Hippocrates, and was defended by Galen, Avicenne (1000), Rhodion (1532), Mercatus (1570), Michaelis (1615), Sennert (1631), Sydenham (1682), Hüter (1711), Mauriceau (1712), Burton (1751), Smellie (1752), Tissot (1795), and many others. To this theory succeeded that of the metastasis of the milk, which was first promulgated by Mercurialis and Willis in 1662, and was advocated, in particular, by Puzos (1743), Lieutand (1750), Levret (1766), Van Swieten, Deleurye (1777), and others. Autenreith formulated his theory in the beginning of this century, which is only a combination of the preceding. His theory was accepted by Schmidtmüller, Carus, Joerg, etc. Then arose the gastro-bilious theory of Trincavellus, which was advocated by Manning, Cooper, Denman, and others.

The fifth theory is the phlogistic; according to which inflammation is the cause of puerperal fever. According to the site of the inflammatory process, we may have three varieties: 1. A metritis, which may be associated with a phlebitis or a lymphangitis (Plater, 1602, Denman, Tissot, Naegelé, and others). 2. An enteritis and a pertionitis. 3. Peritonitis, pure, the view of Johnston, Hunter, Siebold, Capuron, Baudelocque, and others. Then followed the erysipelatous theory, advocated in particular by Eisenmann, and accepted by Delaroche, Bayrhoffer, Gordon, Ingleby, Lee, and numerous English and American authorities; this theory considers puerperal fever an internal erysipelas.

Semmelweiss, in 1847 to 1861, promulgated the following theory: Puerperal fever must always be considered as a fever due to the absorption of a decomposed animal organic matter, and this absorption may result from *auto-infection* (the product of decomposition coming from the individual itself), or from *hetero-infection* (the product of decomposition coming from without). Puerperal fever is not, therefore, a peculiar and exclusive disease of the puerpera. An identical affection, even as has been proved by Trousseau, Schée, Helm, Buhl, Simpson, Tarnier, may be met with in virgins, in the new-born, in wounded of either sex. The point of origin of the disease is found as well in the uterine wound and in slight superficial wounds of the genital organs, as in lesions of the peri-uterine cellular tissue, or in the vagina. The primitive local disease becomes general through the carrying of the morbid process to the cellular tissue, thus gaining in extent, or else it is transported by the lymph of the blood to all the other organs; or else foreign bodies are carried by the circulation, deposited in different organs, and there become the source of the disease.

The causes of isolated cases, that is to say, of those developing aside from all epidemic influences, are:

1. Lesions and wounds of the genital organs.
2. Retention followed by alteration of portions of the placenta or of the membranes.
3. Primitive inflammation of the vagina and of the uterus, such as those caused by gonorrhœa.
4. Finally, infection of wounds of the genital organs by cadaveric emanations, purulent or gangrenous secretions, etc.

Schroeder is a resolute advocate of the theory of Semmelweiss. Doléris says: To-day all authorities are in accord in considering puerperal fever as a species of poisoning. The most resolute localists have renounced the view that the disease resides in the lesion itself. The recent investigations of Championière, Siredey, Quinquaud, Fiouppe, Despine, Bode, plead in favor of the absolute similarity of puerperal and of surgical infection. This is the doctrine held in France, and the one stated by Winckel (1878). It is the doctrine admitted *almost* uniformly throughout the world.

In the United States the belief of *almost* all accoucheurs is certainly in accord with the statements of Charpentier—puerperal fever is septicæmia, differing only from surgical septicæmia in that, superadded to infection, is the puerperal state. The most distinguished exception to this is Prof. Fordyce Barker; he still adheres to the views promulgated by him years ago, and it certainly tends to make every thoughtful man hesitate a trifle in propounding the absolute statement that puerperal fever is *always* simply puerperal septicæmia. In the memorable discussion before the New York Academy of Medicine, in 1884, when Thomas, with all his eloquence, pleaded for the entire identity of this fever with septicæmia, Barker protested alone against such a broad view, and stated that "his creed to-day is fully avowed in his book on the Puerperal Diseases, and unless in the future he learned new facts and new arguments to change his faith, he should die impenitent." In reference to Thomas' argument, he stated that its pathological doctrines were misleading and dangerous, because they were "super-saturated with septic infection." He (Barker) says says that there does exist an epidemic disease differing in all characteristic points from what is known as septicæmia; differing in its origin, its modes of attack, its symptoms, its anatomical lesions. His conviction, therefore, is still that there is such a disease as puerperal fever *sui generis*. Lusk says surgical fever and puerperal fever are not only analogous, but are essentially one and the same process. Of all who discussed Thomas' paper, only Munde was inclined to agree in a measure with Barker. Munde's views are best expressed in his recently published appendix to Cazeaux and Tarnier's Treatise on Obstetrics.

Gallabin holds that a puerperal fever, *sui generis*, may exist. According to Playfair there exists identity between puerperal septicæmia and surgical septicæmia, and there may be either *auto-infection* or *hetero-infection*.

Robert Barnes says: "That there are many points of analogy is undoubted; but there are also points of difference which forbid us to accept the doctrine of identity."

Atthill, Priestly, McClintock, Macan, Johnston, admit that puerperal fever is only septicæmia, the result of ichoræmia.

Parvin, in his recent work on obstetrics, says: "From what is known of so-called puerperal fever, it should not be regarded as a specific disease, and, strictly speaking, there is no puerperal fever, that which is so denominated being a febrile affection caused by the entrance into the system of a poison from without, the nature of which we do not know, the entrance taking place through a wound of the uterus or of some part of the vulvo-vaginal canal."

Fortunately for the women, our treatment of the disease is to-day more certain than our theory as to its orgin, and if in the future a better explanation of the cause is offered than at present acceptable to the majority of accoucheurs, we do not hope for much change in the generally accepted treatment.—*Journal.*

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Baltimore Academy of Medicine.

Reported for the *Cincinnati Medical News.*

The President, Dr. H. M. Wilson, in the Chair.

Dr. B. B. Browne reported a case of

REMOVAL OF TUBES AND OVARIES FOR FIBROID OF THE UTERUS.

The patient had a large fibroid tumor of the uterus, which was irregular in shape and as large as a child's head. She had profuse metrorrhagia and much pelvic pain extending to the left side and limb. Various remedies had been used, but he had not employed electricity, although her former physician had used it, and she said her experience with it was not pleasant. The only thing to do was to remove the ovaries. In looking at them, there is nothing especially interesting about them except that the left ovary is much larger than the right and the tubes are congested. The operation was done a week ago and the patient is now doing well, the temperature not rising above 99½° F. In reply to Dr. H. M. Wilson, he said that he could not recall at present the statistics of this operation. The removal of the ovaries with a fibroid condition of the uterus is much more difficult than with salpingitis, for in the former case the ovaries are fixed down and are difficult to find. The removal of the ovaries is much safer than the removal of the uterus.

Dr. W. C. Van Bibber recalled two cases, not in his practice, in which both women preferred operation to longer suffering.

Dr. H. M. Wilson has now under his care a young woman æt. 24, who has had no menses for one year, and has exquisite sensations over both ovaries. He thinks an operation will be necessary.

Dr. B. B. Browne, in conclusion, said that this operation had been much criticised, because it was supposed to produce sterility afterward. In a paper read before the Clinical Society (see *Maryland Medical Journal*), the writer said that the woman thus operated on is not made sterile, for she is sterile already. The operation can not be blamed for a condition which already existed.

Dr. W. C. Van Bibber then read a paper entitled

PROPHYLAXIS OF YELLOW FEVER,

describing his method of quarantine.

Dr. Miles and Dr. Chisolm did not agree with Dr. Van Bibber in regard to cleanliness. They thought that if the yellow fever were kept out of a place, it would not occur there let the town be ever so unclean.

Dr. Van Bibber does not think that yellow fever ever becomes epidemic in a clean place.

On Phagocytes.

Dr. Wm. Osler has recently delivered a lecture on this subject before the Alumni Association of the Bellevue Hospital, New York.

The question as to the extent to which the important process of phagocytosis is exercised in the body for good and for evil, under normal and pathological conditions, is not at all clear, and any paper that brings out anything new on this subject or corrects the information already possessed, is interesting and valuable. Phagocytes are those cells of the body which possess amoeboid properties, and by the latter is meant not only the capability of free movement, but the possession of a power which enables a cell to take foreign particles into its interior. Such cells are derived from the mesoderma, and are met with in the adult body.

1. As the colorless corpuscles of blood and mucus.
2. The connective tissue cells, free and fixed with the connective tissue proper, or forming the supporting framework of the solid organs.
3. Cells of the spleen, bone, marrow and lymph glands.
4. The vascular and lymphatic endothelium.
5. The alveolar epithelium of the lungs. All these cells possess, to a greater or less extent, the power of taking solid particles into their interior, a function which Metschmkoff regards as a property handed down from the unicellular

organisms. The action of phagocytes as normal physiological factors in the work of the body is important and familiar to many. There are many illustrations from comparative physiology of the important part played by phagocytes in certain transformations which animals undergo, of which the most common is the removal of tail and gills of a tadpole in the development of the frog. As soon as the hind legs begin to bud, leucocytes emigrate into the tail first, and then the gills, and remove them piecemeal.

The action of phagocytes in the body is seen with greatest facility in the organs of respiration, in which, with the cilia, they take part in the work of cleansing the air-passages. In this work there are several groups of cells engaged; the ordinary mucous corpuscles, the alveolar epitheleum, the connective tissue elements of the pulmonary stroma, and the leucocytes of the lymph-tissue in the bronchial, tracheal and mediastinal glands. If the particles of dust escape the activity of one they fall into the clutches of the next remote, until finally all the sharp, irritating particles have been either removed from the body or have been placed in a position in which they could do the least harm, and though not expelled have been imprisoned.

Another physiological process in which phagocytes play a leading part is the removal and disintegration of the red blood-corpuscles which have lived their life and are no longer fit for work. The cells containing the red blood-corpuscles which are present in bone marrow and in the spleen can hardly be regarded otherwise than as phagocytic elements with this definite function. In certain morbid conditions we see this process widely extended, and cells containing red blood-discs are seen in the liver, the lymph-glands, even in the blood itself; this is particularly the case in those states associated with rapid blood degeneration and destruction, as in acute fevers. In certain forms of anemia, so abundant are they in the bone marrow and the spleen, that they have been regarded as directly concerned in the wide-spread hemo-phthisis. Phagocytosis has been studied in the process associated with absorption of extravasated blood. Blood escaped into the tissues does not simply disintegrate and disappear, but the connective tissue elements are actively at work and take up into their interior no small proportion of the colored corpuscles.

In the intestinal canal the leucocytes assist to some extent, at least, in the absorption of fat. The ameboid cells of the mucous coat become filled with fat-globules, and pass into the central lymph-vessels, where they disintegrate, and discharge their load of fat granules, which have, meanwhile, in the protoplasm of the cell, been broken up into fewer particles which form the so-called molecular base of the chyle. Possibly, too, the leucocytes may take up other ingredients.

Turning now from the physiological side we come to the theory of Metschnikoff that these bodies may play an essential part in the protection of the organism from the invasion of specific germs. His first paper bearing upon the phenomena of disease was first published in 1884. It embraced observations, carried on upon the common water flea, of the relation of the leucocytes to a fungus with which those insects are prone to be infected. The phagocytes attack the fungi which enter the body cavity from the intestines, and practically eat them; where one cell is insufficient, several combine to enclose the spores in large giant cells. If the invasion was in such large numbers, and the activity of the fungus so great, that conidia were formed, the resisting forces of phagocytes were insufficient, and the flea succumbed.

Following this line, Metschikoff proceeded to study the relation of leucocytes to anthrax bacilli, to the micro-organisms of erysipelas, and to various other affections. He likened specific inflammation to a warfare in which the invading army is represented by micro-organisms, and the resisting forces by the leucocytes. Even in details the analogy was maintained. Notice of the arrival of the invaders was telegraphed, so to speak, by the vaso-motor nerves; the line of communication, the avenues of mobilization, were represented by the blood-vessels. The aim of the invader is to secure the territory, to rapidly multiply, to live at the expense of his host, and to manufacture and circulate substances injurious to him. The aim of the resisting forces is to encircle the enemy, enclose him, digest him, and render him inert in battle. Many phagocytes die in the process, and, if in large numbers, the heaps of the slain represent pus; an abscess is a battle-ground densely packed with dead bodies. If victory remains with the invaders the organisms pervade the affected part, multiply, and induce conditions incompatible with the life of the part, or perhaps with the life of the entire organism. If the battle is with the host, the parasites are destroyed, perhaps not without loss, but the normal state is gradually restored. Practically, on this theory each organism is regarded as possessing a standing army composed of mesoblastic cells, capable of rapid reproduction and rapid concentration, one important function of which is to protect the organism against destructive agencies invading it from without.

Many observations have been made by Metschnikoff and others in favor of this view; into which we can not enter. On the other hand, observations and arguments are numerous in opposition to it; and Baumgartner takes some of the descriptions of Metschnikoff as to the relative position in which germs and leucocytes are found as conclusively showing that the later are not "the heroes of the day, but the hyenas of the field."

Observations of Holarfeld are directly opposed to phagocytosis. He finds in anthrax experiments that very few of the bacilli are taken up by the leucocytes, and that, in rats, they degenerate in a very few days after inoculation outside of the cells. He states that pus-formation is a conservative action against the penetration of the bacterial germs, but that the centralization of the action of micro-organisms depends much more upon the chemico-biological secretions of the tissues than on the property of cells to destroy them by inclusion. His view, in fact, approaches that of Ribbert, in ascribing the limitation of bacterial growth to nutritional changes, particularly to the restriction of oxygen rather than to any phagocytic action of the cells.

Observations made by Osler in the plasmodium malariæ, show conclusively that in the blood, at least, there is a very slight evidence of the existence of phagocytosis. Here and there, it is true, leucocytes are encountered which have included the ameboid forms of the parasite; but the number of such instances is too small to call forth the assertion that in the circulating blood the leucocytes attack and eat the parasites. Much more work must be done before a decision can be definitely arrived at for or against the theory of phagocytosis; and every one must conclude with Osler that while phagocytosis is a wide-spread and important process throughout the animal kingdom, and while it undoubtedly plays a most important part in many pathological conditions, the question of an active destructive warfare waged by the body-cells against the micro-organisms of disease must still be considered an open one.—*Weekly Med. Rev.*

Translations.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Ilowy, Cincinnati, Ohio.

ANTIPYRINE CONTRAINDICATED DURING THE PERIOD OF MENSTRUATION.—Toxic or grave accidents supervening after the administration of antipyrine have been frequently published; but the conditions under which these occurred have not been sufficiently studied. Without doubt the bad qualities of the drug used have been justly incriminated, but it is also true that sufficient account has not been taken of the bad condition of the patient. Now, I have found that, precisely by reason of its hæmostatic properties, the drug should not be prescribed during the catamenial period, unless it be desired to moderate a menorrhagic flux rebellious to other means.

It is now about a year that I ordered a gramme of antipyrine for a woman suffering with severe dysmenorrheic pains. In consequence of this medication the menses were bruskly arrested, the patient was seized with an intense chill, with shaking of the teeth, with chilliness and cyanotic state of the extremities and of the face, lypothemias and repeated syncopes. The face became red and vultuous, the pulse small and miserable; the patient complained of severe pain in the head, and I must confess that I was under great anxiety for the half-hour during which the accidents lasted. In two other cases I observed absolutely similar symptoms, although somewhat less marked, and since that time I never prescribe the remedy unless there be an absolutely formal indication in the first three or four days of the catamenial period.—*Dr. Huchard, Jour. de Med. de Paris.*

TOXICITY OF COCAINE, by *Dr. Mouzard.*—A child of four years, suffering from gastric disturbance, took by mistake a teaspoonful of a solution of cocaine, 1—20 (making the quantity taken 25 centigrammes of cocaine), destined for external use of some member of the family.

The immediate effect was nil; the child went to sleep; but an hour afterward it awoke with a start, a prey to the most frightful anguish; the face was pale, the eyes haggard, the respiration difficult and irregular. The child had nausea, pains in the upper part of the chest, formications and cramps in the limbs; then appeared formidable choreic agitation. The child was drunk and a prey to terrifying hallucinations.

M. Moizard saw the child two hours after the ingestion of the poison and prescribed an emetic, which brought about a certain amelioration; then he ordered a clyster with 50 centigrammes of chloral hydrate, and two hours afterward a second clyster of 30 centigrammes. The agitation was calmed; the patient's sleep was frequently interrupted during the night by the return of choreic movements; the phenomena became progressively milder, and the next day the child was as well as possible.—*Ibid.*

Destruction of Pediculi pubis (Canzuct).

Insecticide powder of first quality, 250 grammes.
Alcohol, ... 1 litre.

Allow it to macerate for eight days, then filter and add essence of bergamot q. s. to render aromatic.

A sponge is dipped into this tincture and applied to the parts affected.

The insecticide powder alone can act upon the pediculi pubis, but its action is less energetic than that of the tincture, and its employment more difficult.

This tincture can also be employed for the destruction of insects of domestic fowls; for this purpose the tincture is slightly diluted with water and then applied in the form of a spray.—*Ibid.*

Naphthaline in the Diarrhœa of Children.—It can be prescribed for the youngest infants in doses of 10 centigrammes every 2 hours. The purest naphthaline never provokes any unpleasant accidents, even in very large doses.

Naphthaline,
Sacch. Alba, . . . āā 2—4 grammes.
Essent. Bergamot, . . 3 centigrammes.
Ft. pulv. s. a. ct. divid. in pulv. aequal No. xx.

It can also be employed by way of rectal injection in a slightly mucilaginous vehicle to hold it in suspension, for the drug is insoluble.

It gives likewise excellent results in infantile spasms produced by putrid or infectious agents.

Naphthol is superior to naphthaline (Bouchard).—*Ibid.*

TEMPERATURE TO BE OBSERVED IN THE ADMINISTRATION OF MEDICINES.—Professor Levin, in the *Berlin Klin. Wochenschrift,* calls attention to the fact that it is more advantageous to administer medicines (in solution) warm than cold. At a temperature of 40° C. liquid medicines are more rapidly absorbed and the results obtained are more energetic than when they are administered cold.

The remedies can also be given in smaller doses.

For subcutaneous injections, warmth is especially recommended.—*Ibid.*

INCOMPATIBILITY OF CHLORATE OF POTASH AND IODIDE OF IRON.—A fatal accident in a child has revealed the incompatibility which exists between chlorate of potash and iodide of iron. By the mixture of these two substances the iron is precipitated in the form of a sesquioxide and the iodine is completely set free, after the following reaction:

$$2FeI_2+KClO_3=Fe^2O_3+KCl+4I.$$

This incompatibility has since then been tried experimentally innumerable times and found constant.

It is important information for physicians and pharmacists. —*Bolletins farmaceutic, xxvii.*, 1888.

THE following solution of *Hydrargyrum Salicylicum* as a GARGLE is recommended in the *Pharm. Post,* 1888, No. 46:

℞	Hydrarg. Salicylic.	2 grammes.
	Soda Bicarbon.	6 grammes.
	Aq. Rosae.	300 grammes.
	Tinct. Opii. Simpl.	5 grammes.
	Syr. Diacod.	30 grammes.

M. Sig. Gargle.—*Ltshrft f. Therap.* No. 5, 1889.

Microscopy.

THE RULINGS OF CHARLES FASOLDT, SR.—We have received the following from Mr. Frederick Neudorf, Jr., Ph.G., of Albany, N. Y., the home of Mr. Fasoldt. While we have never had the slightest doubt that Mr. Fasoldt did exactly what he has claimed in the matter of reading his remarkable rulings, we are most pleased to be able to make public the confirmation contained in Mr. Neudorf's letter, which is also attested by Messrs. Wm. Headlam, Jr., and H. G. Grose. "Having listened to many discussions and having read much about Mr. Charles Fasoldt, Sr.'s, rulings my curiosity was aroused, so one evening Mr. H. J. Grose, druggist, and I called at Mr. Fasoldt's place of business and requested an exhibition of his handiwork. He received us kindly, and very interestingly entertained us for over two hours, and exhibited his rulings through the microscope with the aid of his new 'vertical illuminator.' The plates were ruled in bands with lines alternately longer and shorter, beginning with 5,000 lines to the inch, and increasing in each band up to 30,000. Above this each band increased by ten thousands up to 250,000. Our examination commenced with the band of 90,000. In the band of 100,000 Mr. Grose and I counted every line on the ends and compared them with the U.S. Standard of measurement, using a micrometer which is composed of three very delicate steel prongs arranged thus | ' |. The first lower prong was placed stationary over the first line of the band of 100,000. The upper prong over the second line, the next lower prong over the third line, and again the upper prong over the fourth line, and then alternately moving the two latter prongs until the upper one was placed directly over the 50th line of the band ruled 100,000 lines to the inch, every line of which we saw distinctly. The distance covered by those 50 lines represented $\frac{1}{2000}$ part of an inch. Mr. Fasoldt commenced his exhibtion where scientists have heretofore been supposed to discontinue their results. This test-plate was then removed from the stage and a micrometer (U. S. Standard) placed thereon, the prongs of the micrometer heretofore used remaining as stationed in the eyepiece. The lines of the U.S. Standard, 2,000 to the inch, were brought into focus. The space between two of these lines corresponded exactly with the space between two of the prongs, thereby proving the truthfulness of Mr. Charles Fasoldt, Sr.'s, claims and the accuracy of his rulings. We then proceeded with the finer rulings, satisfying ourselves of their accuracy until the 230,000 band was brought into focus. We saw the lines, but not distinctly enough for them to be resolved. Several evenings afterward Mr. Grose and I again called to convince ourselves that we had actually seen what we claimed. Mr. Grose said that he resolved the 220,000 band, but not as clearly as on the first evening; but I, on the contrary, saw the lines and space between the lines, and resolved them in the 220,000 band. In the 230,000 band I saw the lines, but not sufficiently distinctly to say that I resolved them. I also looked at the same rulings with the aid of an Abbé condenser, but I could not resolve any lines in bands containing more than 200,000 lines to the inch.—*F. L. J., in St. Louis Med. and Surg. Journal.*

San Francisco Microscopical Society.

Reported for the **Medical News** by C. P. Bates, Recording Secretary.

THE announcement of a paper by A. B. Leckenby on the preparation and mounting of insects resulted in a large attendance of members at the rooms of the San Francisco Microscopical Society recently.

W. S. Morrison and Thomas Eagan were present as visitors. President Poyzant presided, and introduced the lecturer of the evening by a few appropriate remarks.

Mr. Leckenby spoke briefly of the difficulties often experienced by the tyro in manipulating the numerous forms of insect life for slide-mounting and lantern-projection, and proceeded to describe the method pursued by him as embodying the result of many years of patient application to the subject. Starting with the coleoptera, or beetle family, the first step is to devitalize them quickly and while they are in flight, which the gentleman accomplishes by dropping them through a long glass tube into boiling water. The elytra and wings are by this means immovably fixed in the extended position, and remain unaltered during the subsequent operations. The body of the insect is then injected hypodermically with a strong solution of caustic potash and allowed to remain three or four hours, then transferred to a glass slip, and gentle pressure applied, when the viscera and other tissues forming the interior of the body will be expelled. To dehydrate or remove the watery portion absolute alcohol is generally recommended, but the lecturer contended that it was expensive, and not always at hand, while equally good results would follow by placing an ounce or two of refined gelatine in a vessel, pouring on alcohol of 95 per cent., and immersing the object for a short time—the gelatine, from its affinity for water, absorbing that fluid from both the object and alcohol.

The insect is then placed in oil of cloves to clear, or render it transparent, and is ready for mounting permanently in balsam. By this method the insect is rendered entirely transparent, the peculiar geometrical markings of the wings, the abdominal and thoracic rings and the various parts forming the head and limbs are beautifully displayed.

In preparing the lepidoptera, a somewhat different course is pursued, as the wings of all butterflies and moths, being covered with easily-detached scales, must be protected. The butterfly or moth is placed on a square of glass, and liquid paraffine flowed carefully over the entire insect. After cooling, a small aperture is made, exposing a portion of the body, and caustic potash injected; the subsequent operation being the same as for beetles, excepting that sulphuric ether must be used to dissolve off the paraffine, leaving the soft, velvety covering of the wings unimpaired.

In this manner are prepared the beetles, dragon-flies, bees, wasps, caterpillars, etc., and when mounted in balsam they form some of the most beautiful and instructive objects imaginable, whether viewed through the microscope or projected on the screen. Mr. Leckenby exhibited many fine specimens of his handiness in preparing and mounting the different orders of the insect world, noticeable among which were a gigantic tarantula spider, several gorgeous members of the papilio genus, fierce-looking dragon-flies, beetles, wasps, and a large collection of small objects.

The lecture was followed throughout with the closest attention, and at its conclusion the interest in the subject was so manifest and expressive from those present that Mr. Leckenby generously offered to donate a future evening to a more extended demonstration of mounting in balsam.

Disinfection of Instruments.

L. Freeman, M.D., in a paper read recently in the Academy of Cincinnati, details numerous interesting experiments recently made, in association with J. C. Oliver, to determine, by the usual culture methods, the degree to which the processes of disinfection of instruments, etc., are effective. Experiments were at first made on the undisinfected instruments. We quote the author's words:

"On the first occasion I examined a pair of scissors, two knives, and a raspatorium. On the scissors I found the lactic acid bacillus and the mold known as the *oidium lactis*. One of the knives furnished the lactic acid bacillus, the *oidium lactis*, and two species of bacilli which I could not identify. The raspatorium produced the *oidium lactis* and a bacillus not identified.

"Much to my surprise, I found no pus-formers, in fact, no micrococci at all; and as far as the literature on the subject enabled me to judge, none of the bacilli present were at all pathogenic. This result emphasizes one fact very strongly—how a surgeon, if he is lucky, may often operate with unsterilized instruments and yet have good results.

"Taking some knives with corrugated handles, I rubbed a little of a culture of the yellow pus former into the corrugations and into the angles between the handles and the blades. Blood was smeared over the infected places and allowed to dry. The knives were then placed in a five per cent. solution of carbolic acid and allowed to remain, one for five minutes and one for half an hour, and finally removed and washed in filtered water. The now fairly-well moistened blood was scraped off and inoculated in tubes of liquefied gelatine, from which plates were poured at once. On gelatine plates each individual bacterium develops into a separate colony. Now on all the plates poured from these instruments I found not only one or two colonies, nor one or two dozen, but hundreds of little growing heaps of pus-formers, showing that the carbolic acid had had very little, if any, effect on the germs protected by the coagulated blood. I then prepared another knife in the same manner as the other two, and left it in the carbolic acid solution for one hour. The result was the same—the pus-formers were not destroyed.

"I then made an experiment to see if Marten's statement regarding the instantaneous death of the pus-formers when suspended in five per cent. carbolic acid would hold good when the micrococci were dried on the end of a platinum wire. I immersed a wire infected in this manner momentarily in the carbolic solution, inoculated some *agar-agar*, and in a few days obtained a luxuriant growth. I then placed another wire in the antiseptic fluid for the space of five minutes. The bacteria were apparently all soaked off the wire, so that the extremity looked perfectly clean. I thought that in this instance, at least, every micro-organism must surely have been destroyed. Inoculation on *agar-agar*, however, was followed in due course by a growth at one point. Some of the germs were evidently uninjured.

"In consideration of what has been said, it is evidently unwise to pin our faith to either carbolic acid or corrosive sublimate, especially as we have another agent which costs practically nothing, is easy of application and always obtainable, and which is absolutely certain in its effects when properly used. This agent is common boiling water, or its equivalent, steam, at 100°C.

"Where it is practicable to employ streaming steam, it is perhaps the more reliable and certainly the more convenient of the two, as the instruments can be more easily handled and they can be sterilized without tumbling against each other, to the detriment of their cutting edges. Steam should, in general, be used in hospitals, and boiling water in private practice, where it is not always easy to obtain a steam sterilizing apparatus.

"Five minutes of continuous boiling is sufficient to kill the most refractive pathogenic organisms, no matter how they may be mixed with pus or blood, or how effectually they may be stuck away in obscure cracks or inequalities. This has been conclusively proved by Davidsohn in an elaborate series of experiments made in Koch's laboratory. Soyka states that water conducts heat twenty-seven times as rapidly as air, and in addition to this the moisture swells the cell membrane and makes the organisms much more accessible to a given temperature than when in a dry state.

"One or two precautions are, however, absolutely necessary, if we would be certain of our results. The first of these is, that hollow instruments, like a syringe, should be completely filled with the boiling water. The second is, that the vessel should be a covered one, with only a small outlet for the escaping steam. This latter point is really the nucleus of the whole process.

"If the vessel be nearly closed, a temperature of 100° is maintained throughout, including the steam above the water.

"Streaming steam acts more rapidly than steam in the quiescent state; steam at 100°C. is a much better disinfectant than superheated steam. Saturated steam is what is required, and the higher we raise the temperature the dryer becomes the steam. Air, or superheated steam, must be raised to a temperature of 140° to 150° before it becomes as effective a sterilizing agent as ordinary steam at 100°. These facts have recently been brought forward by Esmarch. Hence, all disinfecting apparatus depending upon overheated steam should be discarded."

Gleanings.

THE ORIGIN OF DIPHTHERIA FROM BIRDS.—It has been known for some years that birds and poultry are subject to a disease which corresponds to what in the human being is known as diphtheria. Several foreign observers have gone a step further, and have endeavored to show that the disease is capable of transmission from animals to human beings. Last year Dr. Turner drew up an interesting report for the Local Government Board, bearing on this alleged transmissibility, and he adduced a large number of observations which seemed to indicate a connection between a diphtheritic affection, not only in fowls, but in rabbits and cats, and a similar affection in man. The report comprised several instances in which the "strangles" in horses appeared to give rise to a like train of symptoms. In a thesis by Dr. Menzie, the transmission of the disease from animals to man is attributed to the dejections of the former. Diphtheritic affections among fowls are very common in Italy, and he quotes an instance in which four out of the five children of a medical man were attacked and died. In this case he incriminates the thatched roof, which was inhabited by colonies of fowls, geese, pigeons, etc. The dejections of these animals, washed off by the rain, found their way into the cistern or well from which the supply of drinking-water was drawn.—*Medical Press and Circular.*

VAGINAL IRRIGATIONS IN RETENTION OF PLACENTA.—In the St. Petersburg weekly *Vratch*, No. 26, 1888, p. 502, Dr. Leon N. Varnek, of the Basmannaia Infirmary for Laborers, in Moscow, recorded a remarkable case of prolonged retention of extremely firmly adherent placenta, in a weak, anæmic cook, aged 37, in which, after alarming septicæmic symptoms had gradually developed and all the usual means for removing the foreign body from the womb utterly failed, vaginal irrigation with a 1% carbolic solution proved ultimately successful. The expulsion took place on the ninth day of the treatment, or on the fiftieth day after the woman's labor. The irrigations were repeated daily, their duration varying from four to ten successive hours. The piece of placenta expelled was "flabby, inodorous, and as large as a palm and a half." The womb, which before the expulsion was of the size of a man's head, on the next day was not larger than an orange, and five days later returned to its normal dimensions, the woman recovering speedily and completely.—*St. Louis Med. and Surg. Jour.*

ANÆMIA.—An analysis of one hundred cases of anæmia has been made by Dr. Henry Conkling (*Brooklyn Medical Journal*). He assumes that anæmia is a special disease, and that there is a wide difference between anæmia, the disease, and the so-called anæmic state. From the analysis he has made he draws the following conclusions: 1°. Anæmia is a special disease. 2°. It is nervous in origin, blood poisoning resulting. 3°. It occurs most frequently in young, unmarried females. 4°. It is more severe when present in males. 5°. The majority of the patients are without grave antecedent disease. 6°. When treated, it lasts from six weeks to six months. 7°. It is not succeeded by acute or chronic diseases. 8°. Under certain conditions it may develop abnormal structural tissue change. 9°. It responds well to treatment.

ALBUMINURIA IN ACUTE INFECTIOUS FEVERS.—In order to throw some light on the biological significance of albuminuria in acute infectious febrile diseases, Dr. A. O. Grammatchikoff, of Professor A. G. Polotelonff's clinical laboratory, in St. Petersburg, undertook (*Vratch*, Nos. 18 and 19, 1888, p. 336) a series of systematic observations in fifteen albuminuric cases of various fevers (6 of typhoid fever, 5 of typhus, 4 of croupous pneumonia). The conclusions arrived at by the author may be condensed thus: 1°. When the affections in question run their course quite normally (without any complications), the amount of albumen in the patient's urine remains invariably very small (under one gramme per day). 2°. Hence, as far as the actual loss of albumen by the system is concerned, albuminuria is void of any serious significance in regard to the patient's general state. 3°. In uncomplicated cases, all oscillations in the amount of albumen strictly follow the variations in the patient's temperature. In other words, the amount lessens simultaneously with, and proportionately to that of, defervescence and improvement in the patient's subjective feelings. 4°. In certain cases the amount of albuminuria seems to justify some conclusions concerning prognosis. Any increase in the amount of albumen without any corresponding rise in the patient's temperature must be regarded as a sign of coming complications of some kind (for instance, of parotitis in typhus fever, or venous thrombosis in typhoid, etc.)—*St. Louis Med. and Surg. Jour.*

FOREIGN BODIES (PEASANT PESSARIES) IN VAGINA.—Dr. N. M. Kaküshkin, of the Tambor Zemsky Hospital, reports (*Proceedings of the Tambor Medical Society*, No. 4, 1888, p. 118) the case of a laundress, aged 55, who was admitted with symptoms of peritonitis and profuse offensive vaginal discharge. The examination led to the extraction of an extremely foul, firm ball of wool, of the size of a mandarin orange, which had been introduced by the woman two weeks before. According to her narrative, her last labor, about seventeen years previously, had been followed by prolapse of the womb. In order to keep the uterus well up the pelvis, she had been in the habit for the last thirteen or fourteen years of introducing into the vugina similar balls of wool and leaving them alone until they were expelled by natural forces, *i. e.*, by *vis a tergo* in the shape of a sufficiently tense accumulation of uterine discharges behind the foreign body. The expelled pessary was at once replaced by a freshly prepared one, and so on. The contrivance is said to be effective, though inconvenient, and to be largely used in Russian popular medicine. Dr. Kaküshkin mentions also another variety of peasant pessaries, made of birch-bark, and representing an elastic, light ring about five centimeters in diameter. He recently came across such an one on the *post-mortem* examination of an insane woman with relaxed uterine support, and was surprised to find that neither the ring nor the vagina presnted any offensive odor. Professor Snegireff, of Moscow, also once extracted a similar birch-bark pessary from the vagina of a woman who had been wearing it for several years without ever having any foul discharge or other inconveniences. Snegireff's ring was similarly quite sweet, without the slightest trace of putrefaction or erosion. Both Drs. Kaküshkin and Snegireff find the contrivance excellent, the ring being extremely cheap, convenient, effective and apparently antiseptic, Here is an opening for patent-catchers. The material costs next to nothing.—*St. Louis Med. and Surg. Jour.*

ANOMALY OF KIDNEY.—Dr. A. Lamarche reports in *l' Union Médicale du Canada*, finding in a female cadaver a single kidney, lying transversely over the spinal column, between the fourth and fifth dorsal vertebræ. The inferior convex border of the viscus corresponded to the sacro-lumbar articulation. Its transverse diameter was 5¾ inches; its greatest width, on the right side, 3 inches; its least, on the left, 2 inches; about a half-inch in thickness, and weighing 3½ ounces. The fact of its immersion in alcohol for two months must not be forgotten. This viscus had a normal form (bean-shaped). At its inferior border, two inches from the left extremity, a notch, three lines in depth, was found, and on the edge of the right extremity another notch, of two lines existed. The superior border presented one similar to this at a distance of one inch from the right extremity. There were three arteries and two veins, also two ureters. The author regards this as distinct from the horse-shoe kidney, and as an example of a single kidney. No pathological lesions were apparent.

ICHTHYOL IN ERYSIPELAS.—In the *Meditzinskoïë Obozrenïë*, No. 12, 1888, p. 1164, Dr. Vasily L. Jadkevitch, of Novgorod-Seversk, emphatically recommends giving the most extensive trial to the ichthyol treatment of erysipelas. He adduces five striking cases of his own, in which the morbid process was rapidly cut short by means of an ointment made of equal parts of sulphichthyolate of ammonia and lard, and rubbed into the parts affected three or four times daily. The ointment is preferred by Dr. Jadkevitch to Unna's ichthyolic collodion, on the ground that the former can be easily removed from the parts, while the collodion leaves a black disfiguring film, which, to the patient's discomfort and annoyance (especially in facial cases), remains firmly adherent for a long time after his recovery. —*St. Louis Med. and Surg. Jour.*

Book Notices

AN ELEMENTARY TREATISE ON HUMAN ANATOMY. By Joseph Leidy, M.D., LL.D., Professor of Human and Comparative Anatomy and Zoölogy in the University of Pennsylvania, President of the Academy of Natural Sciences, and of the Faculty of the Wagner Free Institute of Sciences, Philadelphia. Second Edition, Rewritten. With 495 Illustrations. 8vo. Pp. 950. Cloth. Philadelphia: J. B. Lippincott & Co. Cincinnati: R. Clarke & Co. Price $6.00.

The first edition of this work on anatomy was published twenty-eight years ago. At the solicitation of medical students, who had been pupils of the author, he has been induced to prepare the present edition, which has been entirely rewritten and made a new work.

The author is of the opinion that, notwithstanding the excellent and admirably illustrated text-books upon anatomy, which have issued from the English Press, American students, nevertheless, generally desire, if they do not require, such a treatise, as he has attempted to provide them. It may be that *patriotism,* "all things being equal," will cause a student to prefer a text-book that has been prepared by one who has been to the manor born, but we do not believe that this preference would continue if it should be discovered that the *native* work was at all inferior to the foreign. *Sentiment* does not prevail now as it formerly did—it is not strong enough longer to maintain itself along with inferiority.

As is well known, the first edition of Dr. Leidy's work upon anatomy secured a high standing as a text-book. The present edition, however, being really an entirely new work, and embodying the improvements which have been suggested to the author's mind by many additional years of teaching, is greatly superior to the former one. As the work is now issued—prepared as it has been to suit the wants of students in attendance upon the schools of this country—it will undoubtedly meet with very great favor.

The very complicated, difficult nomenclature, as it has been regarded, has been a great drawback, as many have thought, to the successful study of anatomy. This difficulty, however, has its source largely in the deficient classical education of medical students. To those who have some knowledge of Latin the names, instead of being hard to manage, rather assist in acquiring knowledge; as, for instance, a certain muscle which has the name of *Depressor Labii Inferioris*—to the Latin scholar this seemingly very difficult name explains the office of the muscle. Translated it means the depressor of the lower lip, explaining that it depresses, or pulls, the lip down. Another muscle has the very long name (and certainly a very difficult one to pronounce and remember by the unclassical student) of *Levator Labii Superioris Alæque Nasi,* which the Latin scholar translates at once thus: the elevator of the upper lip and of the wing of the nose—the name, as will be seen, embodying in it an explanation of the functions of the muscle.

But Dr. Leidy, with a view of facilitating the study of anatomy and its commitment to memory, has endeavored to simplify the nomenclature. He, therefore, in the text has discarded, as far as was possible, the long Latin names of muscles and other tissues, and employs English names. For instance, the "*Depressor Labii Inferioris*" he calls in the text the "*Infra-labial Depressor.*" To the "*Levator Labii Superioris Alæque Nasi*" he gives the name of the "*Naso-labial Depressor.*" In the margin, however, at the foot of the page, in small type, will be found the full Latin names as given in other works on anatomy.

Many phrases in common use as names have been curtailed of what appeared unnecessary portions, and sometimes the adjective portion of the phrase has been retained in preference to the substantive portion, where, for various reasons, it has seemed more appropriate. Where names of persons are applied to parts they are generally avoided, and others in all respects better adapted to the purpose are used.

The cuts are very numerous and are good. While many are common with other anatomical works, not a few are original.

We have no doubt but that this work will meet with approval.

THE OPERATIONS OF SURGERY. A Systematic Hand-Book for Practitioners, Students and Hospital Surgeons. By W. H. A. Jacobson, F. R. C. S., Assistant-Surgeon, Guy's Hospital; Teacher of Operative Surgery, and Joint-Teacher of Practical Surgery in the Medical School. With 199 Illustrations. 8vo. Pp. 1006. Cloth. Philadelphia: T. Blackiston, Son & Co. Cincinnati: R. Clarke & Co.

This very large work is devoted exclusively to the operations of surgery—surgical principles and surgical pathology not being at all discussed. The author thus speaks of it: "This book is the outcome of a strong belief, which I have held for many years, that a work on Operative Surgery, which aimed at being more comprehensive in scope and fuller in detail than those already published, would be of service to practitioners and students."

This work will be especially valuable to those physicians who are compelled to unite the practice of surgery to the practice of medicine; for it contains a fullness of detail that is not found in ordinary works upon surgery, for such works being devoted to the science of surgery, as well as the practice, do not have space for the minuteness of detail in describing operations as is found in this volume.

Beginning with operations upon the fingers, every operation upon the human being that a surgeon may be called upon to perform is minutely and plainly described, so that no physician or surgeon, having the proper anatomical knowledge and the proper instruments with which to operate, can well fail being successful in performing a necessary one. In describing the operations on the upper extremity, besides describing amputations of the fingers, forearm and arm, there is described excision of the wrist, excision of the elbow, removal of the scapula, ligature of the radial artery in various places, ligature of the ulnar artery, the brachial and axillary, venesection, transfusions, operations on various nerves, etc.

Under the head of Conservative Surgery of the Hand, the author says: "While it is a cardinal principle to preserve every inch of the hand, and that a single finger or the thumb alone is far more useful than the most elaborate artificial limb that can be made, and to gain this limb it is frequently advisable to trim up an injured part and to remove dead bone in preference to doing any set amputation; it must always be remembered that a part may be capable of being saved, and yet ultimately be useless, unless it be at least partially movable. When it is probable that both flexor tendons will die, amputation had best be performed in any finger except the index.

"One condition, which a surgeon in large manufacturing centers is certain to meet with, requires grave consideration, *i. e.*, where a hand, often of a boy or girl, is flayed, owing to its having been caught between rollers which hold but do not crush; here, as the patient draws back, the skin is stripped off like a glove up to the wrist. If any bones are crushed, thecæ or the palmar fascia opened, amputation at the wrist should be performed at once; and Billroth advises this step where the skin is completely stripped off without other injury; fingers entirely deprived of their skin almost invariably become gangrenous, and the result being, 'under the most favorable circumstances, nothing more than an unwieldy cicatrized stump.'"

The Fourth Part is especially interesting, as it is devoted to Operations on the Abdomen. In this part is described ligature of the external iliac artery, of the common iliac, of the internal iliac, of the gluteal, of the sciatic, and of the abdominal aorta. Then follow the operations on hernia, operations on the intestines, excision of the spleen, with descriptions of many other operations too numerous to mention.

We are sure the work will meet with the favor it merits. It will be regarded as an important addition to surgical literature.

PSYCHOLOGY AS A NATURAL SCIENCE, Applied to the Solution of Occult Psychic Phenomena. By C. G. Raue, M.D. 8vo. Pp. 541. Cloth. Philadelphia: Porter & Coates. Price, $3.50.

This work embraces the consideration of the following subjects: Mind Reading, Thought Transference, Hypnotism, Somnambulism, Statuvolism, Clairvoyance, Second Sight, Retrospection, Psychometry, Telepathy, Telergy, The Double, Apparitions, Phantasms of the Living and the Dead, and Spiritualistic Phenomena, etc.

The author states that in the year 1847 he published a small volume in German, entitled "*Die Neue Seelenlehre Dr. Beneke's, nach Methodischen Grundsätzen in einfach entwickelnder Weise für Lehrer bearbeitet.*" That work is the nucleus of the present one. It had five editions in the German language. It was translated into the English by an unknown translator, and was published under the title of "*The Elements of Psychology,*" by James Parker & Co., Oxford and London. It has also been translated into French and Flemish.

It is the object of the work, the author states, to apply psychology as a natural science to the solution of those apparently occult phenomena which, so far as he knows, have resisted all attempts at solution by the methods of research employed by the old psychological as well as the new psychological schools.

This is undoubtedly an interesting work, exhibiting much research and much thought in the field of psychology. We regret that we have not had leisure to so study it as to be able to give our readers such an outline of it as it seems to merit.

It is evident, however, that a principal aim of Dr. Raue is to prove that materialism is incompetent to explain the occult psychic phenomena, which taxes so much the attention of modern thinkers. Of course, therefore, he dissents from the views of Carpenter, Maudsley and others, who hold that all manifestations of the mind and feelings have their source in the operations of the physical organization.

"Nobody," says the author, "denies that 'an increasing specialization and complexity in the function requires a corresponding development in the organization of the nervous structure,' and we may even, with tolerable propriety, reverse this conclusion, and say that where we find a highly organized nervous structure we may naturally expect a corresponding specialization and complexity in the function. Still, this would not prove that the higher nervous development is the *cause* of the increasing specialization and complexity of the function. It would merely state that these two things—higher organization and complexity of function—usually go hand in hand." * * *

"Usually, for instance, the presence of numerous and deep convolutions is considered a sign of higher intelligence. If this be admitted to be a law deduced from a majority of cases, it certainly does not apply to all. If materialism bases upon it the correctness of its conclusions, we should demand nothing less than its application in each and every instance. A single glaring exception would render these conclusions more or less doubtful. Heule shows the drawings of two brains, one of a young nameless German, and the other of the celebrated Gauss. The latter appears so strikingly inferior in its convolutions to the first that Heule remarks: 'These are collections of brains of unknown persons which present great richness in convolutions, all the possessors of which we surely have no right to consider as undeveloped geniuses.'"

Part IV., the last Part, is devoted to occult phenomena. This Part is very interesting, although we admit that we never believed in the existence of these phenomena. We concede, however, that if it is admitted that the *soul* is an entity (considering the mind the soul) which is separate from the body, only dwelling in it and acting through it, many of these phenomena are not unreasonable. The *occult phenomena* are mind-reading, thought-transference, mesmerism, animal magnetism, tellurism, hypnotism, statuvolism, second sight, retrospection, etc.

PRACTICAL LESSONS IN NURSING. DISEASES AND INJURIES OF THE EAR: THEIR PREVENTION AND CURE. By Charles Henry Burnett, A. M., M. D., Aural Surgeon to the Presbyterian Hospital, One of the Consulting Aurists to the Pennsylvania Institution for the Deaf and Dumb, etc. 16mo. Pp. 154. Cloth. Philadelphia: J. B. Lippincott & Co. Cincinnati: R. Clarke & Co. Price, $1.00.

This little work seems designed for nurses as well as physicians. It contains very much very valuable information. Young physicians, on setting out to practice their profession, having had but little time previously for reading beyond their text-books, will find it containing much that will be of great practical value to them.

PHYSICIANS' LEISURE LIBRARY. Bright's Disease of the Kidney. By Alfred Loomis, M.D., LL.D., Professor of Pathology and Practice of Medicine, New York University Medical College, etc. 12mo. Pp. 117. Paper. Detroit: George S. Davis. Price, 25 cents.

To make this work appreciated, it is only necessary to announce the fact that its author is Dr. Alfred Loomis, of New York. Prof. Loomis is looked upon as an authority upon whatever he writes.

THE PHYSICIAN'S LEISURE LIBRARY. A Treatise on Hernia. The Radical Cure by the Use of the Buried Antiseptic Animal Suture. By Henry O. Marcy, A.M., M.D., LL.D., of Boston, Mass., Surgeon to the Private Hospital for Women, Cambridge; President of the Section of Gynecology, Ninth International Congress; late President of the American Academy of Medicine, etc. 12mo. Pp. 251. Paper. Detroit: Geo. S. Davis. Price, 25 cents.

This little book, says the author, is offered the profession as the outgrowth of special studies upon the subject of Hernia for the last eighteen years. In 1870 he first operated for the radical cure of hernia by the open wound method, and the closure of the parts by the use of the buried animal suture. The result of these investigations taught that the application of animal sutures, for the cure of hernia, is clearly of the first importance. Convinced that his own experience has demonstrated the truth of these opinions, he has taken pleasure in adding thereto, as far as possible, the views of modern surgeons, which he offers in the belief that the data is now quite sufficient to settle, with comparative accuracy, the question of operative measures for the cure of hernia, confessedly hitherto an opprobrium of surgery.

It is to be hoped that the method of Dr. Marcy will be studied and tried. If it should be found to be successful, a great advance in surgical treatment will result.

The work contains twelve chapters, in which the various forms of hernia are mentioned and treated at length. The first chapter is devoted to the general considerations of the subject—the definitions of the affection, causation, frequency as to age, sex, occupation, etc. In the following chapters are described the formation of the sac, the coverings, pathological changes, the anatomy—descriptive and surgical, etc. The last four chapters discuss the radical cure of hernia, and the radical cure by the open wound method under antiseptic precaution, and the manner of performing the operation.

ELECTRICITY AND THE METHODS OF ITS EMPLOYMENT IN REMOVING SUPERFLUOUS HAIR AND OTHER FACIAL BLEMISHES. By Plym. S. Hayes, A.M., M.D., late Professor of Chemistry and Toxicology, Woman's Medical College; Professor of Analytical Chemistry, Chicago College of Pharmacy, etc. 16mo. Pp. 128. Cloth. Chicago: W. T. Keener, 96 Washington St.

We have been told frequently that a physician could make an immense fortune by discovering a method, that would be practicable, of extirpating hairs from a lady's face on which they were so numerous as to form a beard or mustache. Now this little book professes to disclose such a method; and, consequently, all that is wanting for an enterprising medical gentleman to realize a fortune is to procure the volume, study it well, and purchase the necessary instruments—the chief of which is a galvanic battery.

But we do not wish to make sport of Dr. Hayes' little work. It describes a scientific and practical mode of destroying those horrible blemishes to the female face—hairs—and is worthy of respect. As the author says, "the employment of electrolysis for the removal of superfluous hairs has stood the test of not less than thirteen years by the profession, and the verdict is that it has come to stay." "The time of criticism has passed away, and the success of the operation depends upon the skill of the operator."

The author has had a very large experience in the employment of electrolysis for the destruction of superfluous hair, having met with cases of all grades of difficulty. He has, therefore, in this little work, drawn from his past experience in describing the various modifications of the operation to meet the numerous difficulties to be overcome, making it his aim to present the subject in such a manner that any physician attempting this operation, no matter how difficult the case may be, need not fail of success.

A chapter has also been devoted to the removal of nævi and other facial blemishes by electricity.

Editorial.

VERATRUM VIRIDE.—It occurs to us that the majority of physicians do not fully appreciate the reliability of veratrum viride, in the form of a saturated tincture, to lessen the force, frequency and volume of the pulse, and to diminish the temperature in those cases in which it is desirable that those conditions should be fulfilled. We are led to make this statement from the fact that we are frequently called to see patients, in consultation with other physicians, in whom we find a frequent and forcible pulse, and a hot skin, and yet at no time has it occurred to the attending physician to administer veratrum viride. Febrifuges and antiphlogistics, maybe, have been prescribed—spts. nit. dulc., spts. mendereri, minute doses of tartarized antim, calomel, digitalis, quinine, antifebrine, antipyrine, etc.—but veratrum viride had not been thought of. Every medical man, of course, knows that veratrum viride diminishes the force of the heart's action; yet while he seems to be aware of the fact, he seldom appears to use the knowledge.

Recently we were called to visit in consultation a gentleman who had an attack of acute mania. His pulse was 125, having considerable resistance. He had been insane for about two weeks. We learned, upon inquiry, that while narcotics of every kind had been administered, as had also febrifuges and depressing agents for relieving excitement, yet veratrum viride had not been thought of. We suggested the use of it—one drachm to three ounces of water, a teaspoonful every two to four hours, according to circumstances—which was assented to, and the result was that in a few hours the pulse fell to 80, and the delirium ceased.

We prescribe the tincture of veratrum viride in all cases, without reference to the character of the disease (the patients being adults), in which there is a frequent, hard pulse, and a hot skin, and we are never disappointed in the results. In all instances, in a few hours, the frequency and force of the pulse are diminished, and the temperature markedly diminished. We have a case in mind, that of a middle-aged gentleman, considerably broken in health, though he had once been a person of robust health. He suffered several weeks ago an attack of traumatic erysipelas of the head and face. He had recovered from the erysipelas, though the attack had been very severe, and seemed to be recovering rapidly, when he began to have chills at indefinite intervals. His pulse run up to 130 during the intervals between the chills, and his temperature rose to 104°. The cause of the chills, frequency of the pulse, and the high temperature all coming on so suddenly during the apparent convalescence could not be satisfactorily accounted for. We will mention that the party had an affection of the lower limbs, which, if not locomotor ataxia, as many physicians had pronounced it, closely simulated it. But without stopping to ascertain the cause of the sudden phenomena before prescribing, but giving attention to the symptoms alone, we made the following prescription:

℞.	Antim. et Potass. Trt. . . .	gr. ⅓
	Tr. Verat. Vir.	ʒj
	Syr. Simp.	℥j
	Aquæ Destill.	℥ij

M. Sig. Give a teaspoonful every three hours.

On calling on the following day, we found the pulse at 86, the burning sensation of the skin relieved, and the temperature but slightly above natural. At no time had there been the slightest nausea.

Veratrum viride has probably been used as a medicine for two or three hundred years, but it has only been about thirty-five years since the saturated tincture was brought to the attention of the profession as a most reliable sedative on the action of the heart by Norwood. His formula at first was kept secret, and he ascribed wonderful virtues to his preparation. He even announced it as a cure for syphilis.

There are very many preparations on the shelves of apothcaries which are but very little prescribed, but which, if their action was better understood, would be held in the highest estimation—as far more reliable than many of the recent discoveries, which, having become very popular in the profession for awhile, drop out of use and are never heard of more.

We hope that physicians may be induced to try the employment of veratrum viride (the saturated tincture) in those cases in which there is a frequent, hard pulse, and hot skin, and observe the results. If used with care there is never any need of the stomach becoming affected in the least. It will lessen the heart's action and diminish the temperature without producing any sensible effects upon the patient.

DR. C. R. MACDONALD, says the Kansas City *Medical Record*, recently removed a rifle bullet from a man which had been in the chest for thirteen years. The case is chiefly remarkable from the fact that the bullet had remained in the pleural cavity for so long a time without setting up pleurisy. It entered the back of the shoulder immediately below the spine of the scapula, and probably entered the pleural cavity by penetrating the intercostal muscles. The operation was performed with antiseptic precautions, and the wound soon healed. A splinter had been removed from the wound of entrance some months after the accident, which occurred to the man whilst marking at a rifle range in Beith. The bullet had gravitated to the lower part of the chest.

THE NEW BUILDING OF THE NEW YORK ACADEMY OF MEDICINE.—The New York Academy is about to erect a building of its own in which to hold its meetings, to contain its library, etc., of which it will have reason to be proud. The *Med. Record* thus describes it:

"The building of the New York Academy of Medicine, which is to be erected immediately upon property lately purchased in Forty-third Street, near Fifth Avenue, has been designed by R. H. Robertson. The lot upon which it will stand is seventy-five feet wide and one hundred feet deep, and when the new home of the Academy is finished, it will be one of the most complete structures of its kind in the city. The building will be five stories in height, and will also have a gable story. The material used in the construction of the front will be a brownish-red Kibbe stone, both rock-faced and dressed, and brick. The style of architecture is Romanesque. The first and second stories have large square windows in pairs, with columns between; the third and fourth floors will be lighted by arched windows, and the windows in the gable are square. The entrance is to be in the end nearest Fifth Avenue, and two large doors are divided by a massive stone column. Above the door are small square windows, and above them a stone ballustrade. The basement of the building will contain the kitchen, lavatories, a room for unpacking books, and machinery. The first story is in itself a well appointed clubhouse. The two doors from the street open into a spacious tiled vestibule, from which a door leads into an inner vestibule, opening into a large hall. On the right are a reception-room, a coat-room, an elevator and stairs. On the left of the hall are the committee or reading-room, and the smoking-room, the latter being 36x26 feet. These rooms are lighted by the big windows in the front of the building. The rear half of the floor is devoted to a large assembly-room, 57x42 feet, and a dining-room, 31x28 feet. These two rooms are separated by a rolling partition, and they can be thrown into one at any time when required for large meetings or a largely attended dinner. One and a half stories are taken for this part of the house, and the rooms are twenty-six feet high. On each side are air-shafts, and by means of a glass arch a flood of light is let in at each end of the rooms. The dining-room is treated with a peaked ceiling, which will be very effective. The half-story in front of the building, which is eleven feet high, is to be used for committee-rooms, etc. The third story will contain the library. The Academy has long wanted room for its many valuable books, and the accommodations provided in its new house will be entirely adequate. On this floor, taking up the whole rear and part of the front, are the reference library and the "stock" room. These two rooms run through one story and a half. In the rest of the front is a reading-room one story high, and above it is another. In the front of the fourth story will be the pathological section and two specimen-rooms; and in the rear will be three large section-rooms and an apparatus-room. On the top floor will be the librarian's apartments, the janitor's quarters, and a miscroscopy-room. The building, when completed, will cost about one hundred and forty thousand dollars."

HISTORY OF ANTIPYRIN.—The Kansas City *Med. Record* gives the following history of this preparation which has come into such general use with physicians. The name has been copyrighted, and is suggestive of its action. It belongs to the class of phenols. There are few remedies more prolific of good results than antipyrin. It is an artificial preparation, soluble in water, alcohol, and chloroform, but not in ether to any extent. The formula of antipyrin is supposed to be $C^{22} H^{12} N^{2} O^{2}$.

It was first brought to the notice of the world by a German named Knorr, of Munich. Dr. Knorr experimented with it for some time till he discovered its medical properties, but on account of the difficulty and details of its manufacture he turned it over to a company, who immediately took advantage of the situation and acquired proprietary rights, which they still retain, making a monopoly of the drug and endeavoring to keep its composition a secret. After a time Dr. Knorr gave to the profession a complete history of the drug, its chemistry and mode of manufacturing. This, however, did not take the copyright from the company, who are still in control of it.

Its well-known antipyretic properties need no comment. It was first used as an antipyretic in Germany, then in Belgium, Italy, France, England and America. It is now probably more employed in England than in any other country. It has attained a great popularity in England among the people for the relief of headache, etc. It is probably of greater value in painful affections unaccompanied by high temperature than it is in fevers. Its wonderful action in affections of the sensory nerves is now settled beyond peradventure, and herein lies its greatest sovereignty. It has very little effect on the arterial tension or the pulse-rate in the absence of thermic rise.

The hectic fever of pulmonary tuberculosis is almost set at naught by its use. The sweats are almost arrested; breathing is made much easier; weariness, sleeplessness, and languor are decidedly relieved. The dose for adults should be much less in fevers than in painful affections. It may be given as a substitute for morphine whenever the latter is indicated. Ten grains, hypodermically, will be followed by as good and speedy results as one-third grain of morphine. We have not been able to discover any good effect on relieving or modifying the desire for morphine in those who are addicted to that habit. It does not seem to produce in any degree the sensation of morphine.

Antipyrin diminishes the quantity of urine and the amount of urea also. It may be combined with other remedies with good effect.

One peculiar circumstance remains to be noted as to antipyrin, namely, that while introduced, probably in the first instance, as a rival to quinine, not so much in regard to efficiency as in regard to price, its market value at the present time, ounce for ounce, in England is double that of quinine. If the respective dose of each substance be taken into consideration, the value is more than four times that of quinine, as antipyrin, as a rule, is given in doses double that of quinine. Notwithstanding this fact, its popularity and consumption are daily increasing.

INTERESTING FACTS IN REGARD TO LEPROSY.—Dr. F. B. Sutleff, in the *Occidental Med. Times*, states some interesting observations and experiences of his in regard to leprosy, as he has studied the disease in Hawaii, Sandwich Islands.

"1. The history of the disease in Hawaii proves it to be contagious to the majority exposed; a few cases standing out against its influence, just as we find in other diseases where contagion is not questioned.

"2. The leper may or may not have syphilis, but the diseases are distinct. He who has never had a sore may be far gone with leprosy contracted late in life. Treatment that does so much for the syphilitic is powerless in the case of the leper.

"3. Personal contact is not safe, as the disease may be transmitted thereby, Hawaii showing many examples where heredity can not account for its presence. It follows that sexual contact is still more likely to infect.

"4. Incculation has been successfully performed, the convict Keanu being a leper.

"5. The germs show great resistance to putrefaction, and retain their power for ill for long periods, rendering inhumation unsafe.

"6. Treatment of any kind has, so far, proved useless. Improvement which has been noted in many cases, is only temporary.

"7. The only remedy is the early and absolute isolation of all cases.

"8. Segregation has been but a partial check in Hawaii, for the reason that only a part of those affected are taken from their homes.

"9. The doctrine of non-contagion has done a deal of harm, and should be met with prompt and earnest protest from those who know the facts as they are to-day. Free discussion will do much to dissipate this erroneous belief."

THE PHYSICIAN'S FEE.—A decision was recently given in a suit for payment for services brought by Dr. Lange, of New York, so says the New York *Med. Record*. Judge Brady, of the New York City Supreme Court, decided that, in an action by a surgeon for professional services, the plaintiff has a right to show that his standing in the profession is high as bearing upon the question of the measure of his compensation. The judge further said: "There is also evidence tending to establish a custom or rule of guidance as to charges of physicians for services rendered, and which makes the amount dependent upon the means of the patient—his financial ability or condition. This is a benevolent practice, which does not affect the abstract question of value, nor impose any legal obligation to adopt it, and can not be said to be universal. Indeed, there does not seem to be any standard by which, in the application of the rule, the amount to be paid can be ascertained. Each case is under the special disposition of the surgeon or physician attending, and he is to decide as to the reduction to be made on account of the circumstances of his patient; and therefore, when the amount is in dispute, it follows that it is to be determined by proofs to be given on either side. The measure of compensation must be controlled more or less by ability in all the professions, and the service rendered by its responsibilities and success.

SYPHILITIC ULCERATION OF THE SOFT PALATE.—Dr. I. W. Condict, of Dover, N. J., writes: I have recently witnessed satisfactory results from the persistent administration of Succus Alterans in an aggravated case of the destruction of the tonsil, velum and all surrounding soft parts, where iodide of potassium had been exhibited more than two months in liberal doses, even as high as four hundred grains per day continually for three weeks of the time, and had failed to arrest the progress of the disease.

(We personally know Dr. Condict as a physician of large practice, much above the average in education, and one of the most successful physicians in New Jersey. Coming from him the above is a very high commendation.—*Ed. Mass. Med. Journal.*)

THE

CINCINNATI MEDICAL NEWS.

VOL. XXII. NO. 257. Old Series. MAY, 1889. VOL. XVIII. NO. 5. New Series.

Original Contributions.

The Acid Salts of Phosphorus.

BY JOSEPH EICHBERG, M.D., CINCINNATI.

A Paper read before the Cincinnati Medical Society, April 9, 1889.

OF all the chemical elements entering into the formation of the body, there is none which deserves a more thorough recognition than the one which shall occupy us briefly this evening. Its actual quantity is very much less than that of the nitrogen compounds; it does not represent a group distinguished by the same functional activity as nitrogen; yet there is a decided resemblance between the two in the varying affinity for oxygen, leading to the formation of a number of oxides and acids of varying basic strength, with the corresponding salts. Indeed, in some respects, the phosphorus compounds present a more interesting series than the nitrogen group; and the salts of lactophosphoric, pyrophosphoric, metaphosphoric and orthophosphoric acids, with the phosphorous and hypophosphite group, constitute a very large family arranged about this central element.

From the physiological standpoint, the phosphorus compounds in the body are of the utmost value. Whether as earthy phosphates, preserving the erect figure and graceful carriage which single man out amongst all created living beings, or, as alkaline phosphates, maintaining the needed alkalinity of the blood and aiding in the elimination of CO_2, or in the more complex form in which we find it an integral part of the most highly specialized tissues of the body, as the lecitoin of the central nervous system, in each of these combinations its physiological function is of a very high order, and its absence readily felt. The absence of the earthy compounds is a well-recognized concomitant, if not a causal feature of those diseased processes in which general deformities are a prominent feature, as in the rachitis of childhood or the mollities ossium of later years.

The active role which phosphorus plays in the daily tissue change is approximately indicated by the quantity of phosphates present in the urine; an excess of these salts being regularly met with where the nervous system has been unduly taxed, or where there has been too rapid tissue change from any cause. The ready test for such a condition of the urine is furnished by an abnormally high specific gravity—as high as 1032 or 1034 in many cases—with the appearance of a dense white cloud, almost as heavy as that due to pure albumen, on boiling, the cloudiness rapidly disappearing on the addition of a few drops of acetic acid.

It is the object of this paper, however, to deal more with the mode of administration than of elimination of this element; and to call attention to the acid salts as distinguished from other compounds. The experience of many years has clearly shown that the form under which the phosphorus is best introduced into the economy will vary with the indication. Thus, the hypophosphites seem best to supply the rapid tissue waste of such diseases as pulmonary phthisis; phosphorus in oily solution or phosphide of zinc are the best combinations for combating neuralgia and nervous disorders; and I should like to call attention to the propriety of employing the acid salts in various gastric disorders, presenting the common and familiar symptoms grouped under the head of dyspepsia.

Phosphoric acid, H_3Po_4, while distinctly a mineral acid, as much so as either nitric or sulphuric acids, is distinguished from these by one important feature, clinically speaking; that, even in concentrated solution, it is non-corrosive. Why this difference should exist, while phosphorus itself is a very highly irritant and strongly poisonous substance, it is difficult to understand; yet equally wonderful is the allotropic modification, the waxy phosphorus, chemically pure, but never undergoing spontaneous oxidation, with a very high fusing point and absolutely not poisonous. Phosphoric acid in diluted form has a tart, slightly astringent and not unpleasant taste, particularly if dissolved in sweetened water. It is readily assimilated, being susceptible of perfect solution.

Phosphoric acid has, however, a local as well as a constitutional effect, and is of great value in many of those disorders known by the general term dyspepsia. It is a familiar fact that many cases, subject to acid eructations and to a disagreeable sour taste in the mouth, owe this hyperacidity to a deficient percentage of free acid in the gastric secretion, in consequence of which fermentations are made possible. Such cases are best relieved by the administration of mineral acids, and it is in them, particularly, that dilute phosphoric acid renders invaluable service. It would seem to supply the needed acid factor to secure complete digestion; and, after absorption, to manifest that tonic effect on the nervous system which seems to be a special feature of phosphorus compounds.

There has lately been placed upon the market a compound containing a number of the acid salts of phosphorus, which recommends itself to the profession by intrinsic merit as a remedy, by its comparative cheapness and by its convenience of administration. Prepared by the Provident Chemical Company, this substance has received the name of Crystalline Phosphates; and its analysis, as given on the label, shows it to be composed of the following substances.

Every gramme contains:	Grains.
Phosphoric acid,	3.24290
Acid phosphate of calcium,	4.49374
Acid phosphate of magnes.,	.37062
Acid phosphate of potassium,	.26252
Acid phosphate of sodium,	.20075
Acid phosphate of iron,	.12972
Chloride of potassium,	.15750
Chloride of sodium,	.16986
Sulphate of potassium,	.12354
Water,	6.26962

Mixed in these proportions, the compound represents a substance of pasty consistency, which remains solid at ordinary temperature, is somewhat hygroscopic (but only after long exposure to a very moist atmosphere), reddens blue litmus paper; dissolves slowly in cold, readily in hot water, imparting to the solution an agreeable, tart taste. Even in dilute solution it has the effect of setting the teeth on edge.

I was first led to use this remedy by a personal experience of its efficacy in most promptly relieving the feeling of heaviness and distress incidental to indulgence in some particularly indigestible article of food. The cardialgia, th fullness and weight in the epigastrium, the metallic, pasty taste in the mouth, were all relieved within ten minutes after taking the remedy. Shortly after this a patient, coming to the office for some local trouble, complained of the unpleasant effect of some cheese which he had taken a few hours before; and was also benefited within a few minutes by taking the crystalline phosphates. In several other instances has success been equally decisive; and in each case the patient declared himself relieved in a very short time.

Prompted by this favorable experience, I began the use of the remedy rather extensively in a number of cases in which gastric symptoms constituted a prominent feature, and, as a result of that test, have been led to the conclusion that we have, in the acid salts of phosphorus, remedies of fully equal value with either dilute nitric or hydrochloric acid; in many cases the phosphorus compounds will be found superior. I give a brief synopsis of a few cases in which its effect has been very decided:

Case I.—E. S., æt. 30, widow, servant; slender build; slightly below average size; somewhat anæmic; has been a sufferer for past four years. Occasional attacks of excruciating epigastric pain. Constant eructations of gas with offensive odor. Almost total loss of appetite, frequent attacks of nausea, and irregular action of the bowels. Examination showed considerable dilatation of the stomach, the lower border being on a level with the umbilicus. Tenderness to pressure over epigastrium Has had attacks of vomiting, vomited matter consisting largely of bile.

Treatment.—Daily lavage of stomach with Oser tube; milk and beef diet; and one drop of a mixture of equal parts of carbolic acid and tinct. of iodine in half a glass of water. Later crystalline phosphate was substituted, and with decided benefit. The appetite improved, the patient gained weight, and the normal color returned to lips and cheeks. She left the city after about five weeks, and I have o subsequent record of the case.

Case II.—Convalescent typhoid E. S., æt. 25, married, mother of one child. Moderately severe attack of typhoid, with several very severe hemorrhages from the bowels, by which her strength was greatly reduced. Improved slowly. No appetite. Feeling of heaviness in stomach. Appetite returned in about three days after taking crystalline phosphate.

CASE III.—Scrofulous disease of bone. L. L., æt. 20. Spent several years in piney woods of Georgia on business. While living in a swampy region contracted a severe fever of malarial type, lasting for six months, and followed by appearance of hard, diffuse swelling under axilla and on inner side of knee joint. Tumor of axilla suppurated and opened spontaneously; continued to suppurate for almost a year. Tumor near knee joint was opened and found to result from fungous periostitis. Bone scraped—drainage tubes—iodoform. Cod liver oil and crystalline phosphates internally. The improvement was very slow. Patient lost his appetite completely immediately after the operation. Following the use of the crystalline phosphate there was a very slight improvement in this respect, but the remedy seemed to have little or no influence on the healing process in the bone.

CASE IV.—Atonic dyspepsia. J. M., æt. 55, spinster. The patient is subject to hysterical manifestations, which never assume a violent form. Appetite poor and very capricious. Bowels irregular. Has some fullness in epigastrium. Ordered crystalline phosphate. Very decided improvement after two weeks.

CASE V.—Recurrent typhlitis. S. R., æt. 25, young man of regular habits; good physique; has had three attacks of acute typhlitis, last complicated with general peritonitis. These attacks always preceded by constipation lasting twenty-four hours or more. Since last attack very careful regulation of diet: buttermilk twice a day, crystalline phosphates, and regular exercise—walking and gymnastics. The crystalline phosphate was continued for about two months. Patient has had no trouble for more than a year past.

CASE VI.—Subacute gastritis. L. S., æt. 28. Has had pain over epigastrium for several days. Tenderness on pressure. Vomiting of considerable quantities of watery fluid mixed with mucus, and occasionally stained with bile. Does not drink liquors of any kind. Admits excessive use of coffee and tobacco. Bowels pretty regular. Complete loss of appetite. Pulse small and frequent. Face haggard. Rest in bed; milk diet; crystalline phosphates. After ten days, mixed diet. Recovery in four weeks.

CASE VII.—Acute indigestion. J. G., æt. 35, commercial traveler, generous liver. Following a late lunch and the taking of considerable wine the night previous, awoke in the night with pain in the stomach, intense and persistent nausea, and a feeling of general discomfort and oppression. Ordered crystalline phosphate and a light diet. The distress was relieved after the first dose; remedy persisted in for two days longer, though patient declared himself well after the first day.

These cases represent but a very small fraction of the whole number of observations, but they may be taken as types of the variety of disorders in which the test has been applied. The experience gained from seventy-two cases, being the whole number in which the remedy was employed, would indicate that the best effect is obtained from the remedy when given about an hour after a meal, at the time when the normal acid element of the gastric secretion is being furnished by the mucous membrane. When well diluted the solution is not only more palatable, but seems to act more promptly. Whether hot or cold water be employed is a point that may be left to the caprice of the patient, there being, apparently, no different results obtained with different temperatures.

The more acute cases show a more decided relief than cases of longer standing; and the most satisfactory results are obtained in the very common cases of epigastric distress occasioned by a single indiscretion in diet. In these the effect is truly surprising, particularly so to the patient, the transition from a feeling of intense discomfort to the normal state taking place with great rapidity, and not being followed by any return of the symptoms.

Abscess of the Lung Following the Retention of a Nail in the Bronchus for a Year.

BY HOBART CHESSMAN, M.D., INSTRUCTOR IN VENEREAL AND GENITO-URINARY DISEASES.

Read before the Manhattan Medical and Surgical Society, December 1, 1888, and reported at the Clinical Society of the Post-Graduate Medical School and Hospital.

GEORGE B., three years of age, was brought to me on September 25, 1888, having coughed up a nail the evening before. He was pale, emaciated, and feeble. The skin was hot and wrinkled, but moist with perspiration; the breath was very offensive, and there was being constantly coughed up a very fetid, purulent secretion, most of which was swallowed. Physical examination showed dullness in the middle and lower portions of the right lung, and numerous moist rales of various volume, together with tubular breathing, were audible in this region. The mother gave the following history, which was afterward corroborated by the father, as well as by several of the neighbors. About a year ago she had given, one day, the child a hammer and a nail, like the one coughed up, to play with. He was thus sitting on the floor when, beginning to cry and cough, she discovered that the nail had disappeared and that the child was struggling with something in its throat. The coughing and gagging continued for some time, and quite a little bloody matter was coughed or vomited up. After a few minutes the coughing mostly ceased for the time; but from this date the child began to be troubled with a cough which never entirely left him. At times it would continue very severe for days or weeks, and then there would be an interval of comparative relief and the general health would be good. After six or eight months had thus elapsed, it began to be noticed that the breath and sputa were offensive, and fever and sweating were also observed. Since then the patient had grown by degrees more emaciated and feeble, and the paroxysms of cough had become very violent and distressing. While the child was in one these paroxysms the father lifted it by the legs, the head dependent, slapped its back between the shoulders rather vigorously several times, and with some impatience and desperation at the constant annoyance, and with a vague idea of aiding the child in what appeared to be an effort to expel something from the lungs. Upon putting him down the child appeared to be struggling with something in his throat, and the father inserted his finger, extracting from it a nail, which was covered with a thick coating of iron rust and mucus. It was originally tin plated. It measured an inch and a half in length, was cylindrical, with a sharp pencil point, and a circular head five lines in diameter.

After the expulsion of the nail the paroxysms of cough were less violent, but pus continued to be expectorated in connection with symptoms of septicæmia, and at the end of three weeks the patient died. The case is, unfortunately, incomplete from lack of autopsy.

Poulet quotes an autopsy by Leuret on a lunatic, in which the right lung was normal except that there were some adhesions to the costal pleura. The left lung, however, was extensively adherent to the costal pleura, and was hepatized and filled with tubercles, the majority of which were softened, and the lining membranes of the bronchial tubes were red and thickened. The trachea contained a nail an inch and a half long, the head of which was engaged in the left bronchus. The wall of the bronchus, which had been in contact with the head of the nail, was ulcerated and its inner layer destroyed; the nail was covered with mucus and oxidized.

Autopsies in other cases in which foreign bodies of different kinds have lodged in the tracheæ and bronchi, and remained for considerable time, have shown that, in consequence, hepatization and cavities have resulted without the presence of tubercles; the cavities being simply abscess cavities. Such, probably, was the conndition in this case. In many cases, supposed to be of this nature, after expulsion of the foreign body either spontaneously or by surgical operation, recovery has taken place. But in other cases of this character, where extensive local changes and profound constitutional disturbances have occurred, as in this case, death has resulted, notwithstanding the removal of the original cause.

It is not very uncommon, as is well known, for foreign bodies, such as pieces of bone of considerable size, to remain in the tracheæ or bronchi for many years, tolerance in the course of time having been established, after which very little disturbance was occasioned by their presence. Sometimes in such cases, after years of tolerance, symptoms have recurred, resulting in the expulsion of the foreign body or in death. This is explained by supposing that the foreign body which, during the period of tolerance had become embedded or fixed, is again freed by ulceration of the enclosing tissues. Whether in the case before us the nail had all the time remained free, and was only waiting the classical procedure, to which accidently the father finally resorted, to expel it, is more or less a matter for conjecture.

Foreign bodies, primarily embedded in the œsophagus, have been known to find their way by ulceration into the bronchi (Poulet); but such instances are rare and are accompanied by œsophageal symptoms. No such symptoms occurred in this case. The patient continuing to have a good appetite most of the time for several months following the disappearance of the nail, swallowed solids and fluids without appreciable difficulty from first to last. From this fact and from the primary symptoms which have been described, it seems altogether probable that the nail found its entrance through the larynx, either at the instant or during the act of vomiting immediately following the accident.

One peculiar circumstance of the case is that the parents not once thought of connecting the cough, which began at that time and continued uninterruptedly during the whole year following, with the disappearance of the nail, until the father unexpectedly extracted it, as described, from the patient's throat. Several physicians at different times are said to have examined and treated the patient in the meantime, no one of whom ever expressed a suspicion of a nail as the cause of the cough. The child had always been robust and well previous to the accident, except that it had once had what the mother supposed was inflammation of the lungs, but from which it promptly and perfectly recovered several months prior to the accident.

A Case of Nephrotomy.

BY L. W. STEINBACH, M.D., OF PHILADELPHIA.

Read before the Philadelphia County Medical Society, March 27, 1889.

ON July 17, 1888, Mrs. Anna H., 44 years old, from New Jersey, was sent by her attending physician to my department in the Polyclinic with a statement that she had been under his care for about a month, that she presented symptoms of hepatic and gastric disorders which brought about anæmia, nervousness and irritability of the heart. She complained of indigestion, frequent vomiting of food or of mucus, attacks of palpitation of the heart, and loss of flesh. One week ago his attention was directed to an induration in the right hypochondriac region, and, deeming it of serious import, he referred the patient to our clinic.

From her own statements and those of accompanying friends we gathered, in addition to the above, the following history:

Mrs. H. was formerly a hard working country woman, who bore six healthy children, but had had no miscarriages. She suffered in several of her confinements with puerperal mania, but considered herself in good health until eleven years ago, when, she thought, she became dyspeptic. Five years ago she noticed a lump in her abdomen of which she made no mention to any one until one month ago, up to which time she was able to attend to her household duties. She complains of headaches and constipation, and has not noticed any sediment in, or discoloration of the urine, nor could she recall having suffered with pain that would indicate the passage of a biliary or renal calculus. Her pulse, respiration and temperature are normal, she looks anæmic, her complexion is muddy, her conversation and her behavior indicate the existence of some mental weakness, the body is emaciated. Inspection shows a prominence in the right lumbar region, whilst percussion and palpation reveal the presence of a tumor extending from the lower border of the ribs vertically for about seven inches, and, laterally, occupying the center of the lumbar region to the extent of three inches. The percussion dullness is continuous with that of the right lobe of the liver. The tumor is freely movable below, and felt through the abominal walls imparts the sensation of a bag filled with small pebbles. Believing that the case before me was one of gall-bladder filled with calculi, and fearing that manipulation would cause rupture of the cyst, I desisted from further palpation and directed my inquiries toward finding other symptoms of biliary obstruction. I drew off the urine with a catheter and submitted it to a chemical analysis, which showed the absence of albumen and the presence of some bile-pigment. No particulars of the nature of the stools could be obtained. In a letter directed to her physician I gave it as my opinion that the patient was suffering from the effects of an enormously distended gall-bladder filled with calculi, and recommended a cholecystotomy.

One week later she returned with the consent of her physician ready to undergo the proposed operation. After a preparatory treatment by baths, a laxative and rest in bed for two days, and after a consultation with my assistants and the physicians composing my class, in which the existing symptoms, and especially the absence of pronounced jaundice, were separately and carefully considered, I believe there was no more reserve in the minds of these gentlemen than in my own that the former diagnosis was the correct one. Dr. Keen also hastily examined the patient, concurred in the diagnosis and lent his kind assistance in the operation.

On July 26, the patient being anæsthetized with ether, an incision three inches in length was made in the right linea semilunaris, over the most prominent portion of the tumor, beginning at the border of the ribs and dividing the abdominal muscles and peritoneum; the apex of the tumor was reached without encountering any of the abdominal viscera. The calculi could now necessarily be felt more distinctly than before the division of the abdominal wall, and, meeting with difficulty to place the tumor on the trough-shaped apparatus devised by Dr. Keen, it was decided to pick up a fold in the cyst between two pairs of hæmostatic forceps and make an incision between the forceps, so that the calculi might be removed without permitting the escape of bile or mucus into the peritoneal cavity; this was accordingly done, and a few pieces of calculus removed, which, however, did not correspond in shape, color and general appearance to calculi of biliary origin, especially when the forceps grasped a stone evidently of large size and immovably fixed.

The idea of impacted gall-stones was dispelled by the appearance of these calculi, and the thought that flashed upon the mind of every one was that the tumor was a kidney.

The fear of rupturing the normal gall-bladder having suddenly vanished, the lips of the abdominal incision were drawn apart more freely, which brought to view the margin of the right lobe of the liver and a normal gall-bladder in its normal position.

Further examination showed the tumor to be the right kidney distended by several calculi of different shapes and sizes. The organ itself was twisted by being turned upon its vertical axis from behind forward and to the left, and upon its horizontal axis from above downward and from behind forward, so that the dorsal surface and the upper end presented at the anterior abdominal wall.

It was now at once decided to remove the kidney, a superficial examination indicating the existence of a kidney on the left side. The pedicle of the tumor, consisting of ureter, artery and vein, was ligated *en masse* with a silk cord, the kidney cut off, the abdominal incision closed with sutures and dressed. The patient was put to bed and after half an hour came out from under the influence of the anæsthetic and inquired of the nurse about the particulars of the operation. She gave no evidence of pain or suffering, and assumed her usual air of indifference to her surroundings which, according to the statement of her niece, was her peculiarity. Three hours after the operation the bladder was catheterized, but no urine obtained. Catheterization was repeated at intervals of six hours during the two succeeding days with a like result. The temperature at 8 o'clock P. M., six hours after the operation, was 101° F., falling to 99° on the following morning, gradually rising to 103° toward evening, and falling in the same manner to 100° on the morning of July 28. She slept for a few hours during the night after the operation, and after a small dose of morphia; took moderate amounts of nourishment and some stimulants. About noon of the third day began to complain of soreness all over the body, became irritable and restless, but continued to take milk and whiskey. She passed no urine up to the time of her death, which occurred at 6:20 P. M., fifty-four hours after the operation, caused by suppression of urine. A post-mortem examination was not held.

The removed kidney with the calculi weighed fourteen and a half ounces, and is among the pathological specimens which Dr. Keen presents this evening.

In submitting the case for discussion and criticism of the Society, without explanations in justification of the course which I have pursued, I am adding one to the great number of recorded and unrecorded cases of movable kidney, the removal of which has been attempted or accomplished in the belief that the tumor was ovarian, uterine, splenic, or belonging to any of the abdominal or pelvic organs.

Selections.

A Case of Laparotomy for Extra-Uterine Pregnancy.

BY X. O. WERDER, M.D., OF PITTSBURG, PA.

A Paper read at the Alleghany County Medical Society.

At the November meeting of this Society I reported a case of extra uterine pregnancy in which I had performed abdominal section with a successful result. To-day I present the specimen of my second case of tubal pregnancy, removed by laparotomy on February 14th of this year.

The history of this case is, briefly, as follows:

Mrs. M., 27 years of age, married, two children, the youngest 16 months old, has been suffering with periodical attacks of severe abdominal pains for almost a year, for which she several times required medical treatment. During the five or six weeks preceding the operation these attacks increased in frequency and severity, making her unfit to do her ordinary household duties. Walking almost always produced a great deal of suffering. On January 26th, of this year, I was consulted for one of these attacks of pain, which was referred to the pelvic region, principally the left side. Making a vaginal examination, I found the uterus enlarged to the size almost of a two months' pregnancy, and to the left of this, in the region of the left tube, a soft, extremely tender mass, which was slightly movable. A careful bimanual examination could not be made on account of the very great sensitiveness of these parts. She had menstruated regularly every four weeks during the last eight or nine months, and was at this time still nursing her baby. At the two subsequent examinations I found no change in her condition except, perhaps, that this tumor was slightly larger than before. The diagnosis was not quite clear, but I was inclined to the opinion that it was either a hydrosalpinx or a pyosalpinx, more probably the latter. As her suffering at times had almost become unbearable, I advised laparotomy, to which she readily consented, but the operation was deferred until after her next menstrual period, which was now very close at hand. Menses lasted five days, and presented nothing unusual. In the afternoon of the 13th of February, the day preceding the operation, she came to my office in a carriage, from her home, for the purpose of going to Mercy Hospital. On examination I found her condition unchanged; the mass, however, seemed now decidedly larger. The riding on the rough country road from her home did not seem to have caused her as much suffering as expected, and she was cheerful and feeling better than for several days previously. But on her way to the hospital the pains returned in unusual severity, and she arrived there faint and nearly collapsed. Several hypodermic injections of morphia made her more comfortable, but she continued very sick and sore all night. On my morning visit, before the operation, she looked very pale and was very feeble, still suffering considerable pain. Vaginal examination was not made.

On opening the peritoneal cavity dark blood escaped from the wound, and the abdomen was found containing a considerable quantity of blood, liquid and coagulated. In reaching down for the sac on the left of the uterus, I felt a small rent in it, probably a half inch long, which, however, in trying to bring it to the surface, was enlarged, so that all its contents escaped into the abdominal cavity. The bleeding was now very free, the blood being bright red, and easily distinguishable from the old dark blood already contained in the abdomen. The sac was now tied off, and the clots contained within the pelvic cavity turned out. After washing out the abdomen with hot distilled water it was closed, leaving, however, a glass drainage tube. Blood continued to discharge from this tube for three days, when it was removed.

The patient rallied very nicely from the operation and made an uninterrupted recovery, her temperature and pulse remaining perfectly normal after the fourth day. She left the hospital on the twenty-first day, and is now in good health.

Rupture of the tube must have taken place on her way to or at the hospital, probably as a consequence of the jolting of the carriage. This evidently was the cause of the faintness and slight collapse after her arrival at the hospital the evening before the operation.

Comparing the history of the two cases operated on by me, we find the first case an almost typical one of ectopic pregnancy, and one of comparatively easy diagnosis to one at all familiar with this interesting anomaly, while the second case is as atypical as possible, in which I claim a diagnosis to have been entirely impossible, for there was not the slightest reason to even suspect a pregnancy, as the patient had been menstruating regularly, her last catamenial period terminating just a few days before the operation, and she was still nursing her baby at the time she came under observation.

This case illustrates again the great difficulties in diagnosing extra-uterine pregnancy, and I can not agree with Hanks, when he states that the diagnosis can be made in at least 95 per cent. of cases. The case also demonstrates that this interesting affection is by no means such a very rare condition as some seem to suppose, as this is the second case occurring in my own practice within the period of four months. That this was a case of tubal pregnancy there could be very little doubt, but in order to be perfectly certain I sent the specimen to Dr. Wm. H. Welch, of Johns

Hopkins University, Baltimore, for examination, and he verified the diagnosis. The specimen, he states, consists of an ovary, part of a Fallopian tube, the intervening broad ligament, the fœtal membrane and a placenta with umbilical cord.

New York Academy of Medicine.

ANDREW H. SMITH, M.D., VICE-PRESIDENT, IN THE CHAIR.

Dr. W. Gilman Thompson then read a paper on

THE THERAPEUTIC VALUE OF OXYGEN, WITH EXHIBITION OF ANIMALS UNDER HIGH PRESSURE OF OXYGEN.

He said he had been impressed by the fact that while some observers claimed the most brilliant therapeutical results from the use of this agent, others hold that it was but of little, if any, practical value, and still others used it in such a vague way that no reliance could be placed upon the results obtained. As was well known, the ordinary pressure of the atmosphere was fifteen pounds to the square inch. Of this amount, three pounds of pressure was exerted by the oxygen, and twelve pounds by the nitrogen. The first question that arose was, Does an increased pressure really cause more oxygen to be absorbed? Under any circumstances, the hemoglobin of the blood could take up but two and a half per cent. more of oxygen, and it was also a fact that it could not enter the plasma to any extent.

In most of the older text-books it was stated that animals could not live in pure oxygen, the system being burned up as it were by the increased tissue-changes excited by it. This idea, however, was an entire mistake, as was conclusively demonstrated by Dr. Andrew H. Smith in the series of experiments made by him in 1869 and 1870. Having referred to some of the symptoms produced in the human subject by the inhalation of oxygen, he said that very little additional oxygen could be made to enter the system by any amount of pressure short of that which would produce injurious effects.

He then exhibited the apparatus which he had had constructed for the purpose of exposing animals to high pressures of oxygen. It consisted of a strong iron drum or chamber, with glass-covered openings at each end, in which the animal to be experimented upon was to be placed;

and to this oxygen was supplied at any degree of pressure desired from a cylinder containing the gas, at a pressure of two hundred and twenty-five pounds to the square inch. Two animals, a monkey and a pigeon, which had been exposed for one hour to a pressure of thirty pounds to the square inch, oxygen, in addition to the ordinary pressure of the atmosphere, fifteen pounds to the square inch, were taken from the drum in an apparently perfectly normal condition.

Dr. Thompson then proceeded to make a detailed report of a number of experiments he had made upon animals which were in a normal condition at the time the experiments were commenced; the animals being dogs, cats, pigs, monkeys, guinea-pigs, pigeons and alligators. It was found that all the animals could exist comfortably in the oxygen until a pressure exceeding three atmospheres was employed. The higher orders of animals were affected before the lower ones. As a rule, a decided fall of temperature, often amounting to from 4° to 6°, was observed; and only in cold-blooded animals was there any rise in temperature. This marked decrease in temperature he did not believe was to be attributed at all to the effects of the oxygen, but to the profound disturbances in the system caused by the high pressure employed. If, as was claimed by the older writers, a greatly increased tissue-metamorphosis was caused by oxygen, this would unquestionably be accompanied by an increase, and not a diminution, of the body temperature. In a paper read before the Royal Academy of Madrid, Valenzuela reported similar results. In animals subjected to oxygen in a pneumatic chamber under increased pressure, he found that the temperature was reduced several degrees, and rabbits, in which septicæmia had been artificially produced, had the temperature reduced to normal.

In such of the animals as died as a result of subjection to high pressure of oxygen, or were killed after removal from such pressure in the pneumatic drum, Dr. Thompson found pulmonary engorgement and dilatation of the right heart. The convulsions which usually resulted when the pressure was carried to a high point, were, as a rule, quickly controlled by blowing off five pounds of pressure. He also tried the experiment of subjecting animals on alternate days to high pressure of oxygen and to compressed air, the series of observations being maintained for a considerable period. The cause of the convulsions produced by exposure to high pressure of oxygen, he said, was as yet undecided, but he was inclined to attribute it to the difference in the diffusion of oxygen and carbon dioxide under different degrees of pressure.

A second series of experiments was performed upon animals in which abnormal respiration had been induced. Dyspnœa might be classified as follows:

(1) That due to abnormal conditions of the air.
(2) Due to abnormal conditions of the blood.
(3) Due to obstructed circulation.
(4) Due to diminished surface from aëration.
(5) Due to neurotic influences.

In a cat in which dyspnœa was produced by cutting both vagi instant relief was given by exposing the animal to oxygen; while, on the other hand, the dyspnœa was increased by compressed air. In the second experiment a canula was introduced into the pleura of a dog. In the third, pulmonary congestion was caused in a cat by injecting a solution of nitrate of silver into the lung-tissue, and the dyspnœa resulting therefrom was greatly relieved by oxygen. In other experiments the lung was compressed by injecting considerable quantities of water into the pleura, and in still others the animals were bled to the extent of many ounces. The results of these experiments, he said, went to show that oxygen does aid, in a moderate degree, certain types of dyspnœa.

In considering the therapeutic value of oxygen it was to be borne in mind that it was a physical impossibility to take oxygen into the blood. This agent had been employed, first, as a curative in certain diseases of the blood and circulation, and, second, as a palliative in dyspnœa due to various causes. Of late, its use has increased to such an extent that two or three hundred thousand gallons of it were now consumed annually in New York City alone. Among the affections, in addition to dyspnœa from whatever cause, in which it was claimed that it had proved of benefit, were anæmia, chlorosis, croup, chronic gastric catarrh, migraine, cholera, and opium narcosis. It was used more generally in this country and on the Continent of Europe than in England. In Paris a supply was kept on hand at the stations along the Seine for use in resuscitating persons rescued from the river, and also at some of the fire and police stations.

In anæmia, chlorosis, etc., Dr. Thompson said he could see but little advantage over good fresh air in giving diluted inhalations of oxygen two or three times a day, as was the usual practice in such affections. It did not seem rational to him to expect that sufficient oxygen could enter the system, under these circumstances, to produce anything but a temporary effect. In cases of blood poisoning, again, he had failed to see any relief afforded by oxygen. In certain subjective cases of dyspnœa it might relieve, but in a case of poisoning by illuminating gas, which he had seen at the Presbyterian Hospital, it was kept up for nearly three days without any effect either on the rate of breathing or on the cyanosis present. In cardiac diseases his experience with oxygen had not been encouraging, and he referred particularly to a case of malignant endocarditis, in which it proved of no avail in relieving the dyspnœa. In certain cases of asthma and uræmic dyspnœa, however, it gave decided relief, and in such he believed it was an invaluable therapeutic agent; though not, of course, curative.

Dr. J. West Roosevelt spoke of the relation of the oxygen inhaled to the amount of oxygen absorbed, and said that while the amount which entered the plasma or the hemoglobin of the blood was comparatively small, he believed it was sufficient to cause appreciable results in many instances. As to the therapeutic value of oxygen, in the neurotic form of dyspnœa we had a condition in which the mere act of inhalation and the engaging of the attention of the patient would often have a beneficial effect. With oxygen in anæmia he had met with fairly good results, though the patients improved less rapidly than under the use of iron. If in any case the hæmoglobin was not saturated, an improvement showed that more oxygen was carried than under ordinary circumstances. In his experience oxygen had proved of considerable value; and in cases of diminished surface for aëration he had seen cyanosis decidedly improved under its use.

Dr. George L. Peabody said that so many circumstances were involved in estimating the value of an agent like oxygen that it was difficult to arrive at positive conclusions respecting it. Thus, wher it was not the only therapeutic agent employed, it was impossible to say just how much benefit was derived from it; and this difficulty was increased in diseases which naturally tend to recovery. The question of the utility of oxygen, he believed, was still undecided. When the idea of its administration first occupied the profession it was the practice to give internally chemical substances, like chlorate of potassium, for instance, which were known to be rich in oxygen. It was far from certain, however, whether they yielded up their oxygen on entering the body; and even if this were so, it seemed probable that the resulting compounds might have a more or less caustic effect upon the tissues. This was apparently the case with osmic acid.

Later, it had become the practice to give oxygen by inhalation so that it would come directly in contact with the lungs. Its absorption depended probably on the amount of hæmoglobin in the blood at the time the oxygen was inhaled, but in any event the amount absorbed was unquestionably small. There was good reason to doubt the alleged efficiency of this agent, and personally he believed that just as much relief, as a rule, could be obtained from fresh air. It might be tried, however, in maladies attended by dyspnœa which the blood is unchanged, such as pneumonia, emphysema, croup, and asphyxia from toxic gases; although, as Dr. Thompson had said, in poisoning from illuminating gas it had failed to give relief. There was no justification, he thought, for the extensive use of oxygen in general diseases, such as anæmia, chlorosis, gout, lithæmia, etc. Although the pulmonary gymnastics of the inhalations might have a beneficial effect in certain instances, there were other remedies which could be used with much greater advantage. That the use of oxygen hastened recovery in such diseases he did not believe, and the recognized facts of physiology were at variance with any such conclusion.

Dr. Beverly Robinson said that he differed entirely from Dr. Peabody, and that his clinical experience in many conditions afforded the most conclusive proof of the immediate and marked relief resulting from the use of pure oxygen. In anæmia he had found that those cases were most improved in which oxygen was used in connection with iron. The purity of the gas was a point of the utmost importance, and he said that a gas which he had formerly employed gave such poor results that he ceased to use it. There was a gas now manufactured in New York which was said to contain a certain amount of nitrogen monoxide; and it was worthy of note that Brown-Séquard had expressed the opinion that nitrogen was of great service in preventing the irritating and intensely exciting effects of oxygen alone.

In albuminuria connected with atropic nephritis he had found the general nutrition of the patient notably improved under the use of oxygen; the digestive and assimilative powers being greatly assisted by it. Even in phthisis, while it did not have curative effect, it might prove beneficial. In the first place, the inhalations caused the patient to expand his lungs thoroughly; secondly, oxygen was itself an antiseptic, and, therefore indicated; and, thirdly, it had the effect of improving the general nutrition. As had been well said, oxygen was really prescribed every time that a patient was sent to the mountains, to Southern California, to the plains, or on a sea voyage. But there were many cases in which it was impossible to send patients away, and he believed it was possible to stimulate the hæmoglobin in the blood, and thus enable the patient to carry more oxygen. In the use of such agents as oxygen he did not think we should be guided so much by experimental researches as by practical clinical experience. Without considering the curative effects of oxygen, there were certainly many cases where the last hours of patients could be rendered much more comfortable by resorting to its use.

Treatment of Acute and Subacute Nephritis.

AT a meeting of the New York Academy of Medicine, March 7, 1889 (*New York Medical Journal*), Dr. Francis Delafield read a paper upon the treatment of acute and subacute nephritis.

In very mild cases no treatment was required beyond confinement in bed and a fluid diet. In severer cases the fever, prostration, loss of appetite, and vomiting all required no active medicinal interference, and the anæmia, though it was well to prevent its development so far as possible, was not to be attacked by drugs until convalescence became established. The nephritis itself and the cerebral symptoms (caused by contraction of the arteries and increased arterial tension) alone needed active treatment.

It was to be remembered that in nephritis, though the quantity of urine voided was small, its quality was good; that its secretion by the inflamed kidneys tended to relieve their congestion, so that they were better off than if at rest; and that a considerable diminution in the amount of urine could be well borne for a week or two. Convulsions and coma belonged, it was true, to the early stages of nephritis with scanty urine, but prolonged anuria produced rather a typhoid state. It was, then, not well to pay much attention to the diminution of urine; it was better to relieve the congestion of the kidneys so far as possible, and enable them to do their own work, which latter would of itself still further reduce the amount of congestion in them. The nephritis would continue, but the excretion of urea might meanwhile be ample.

The congestion of the kidneys could be relieved for short periods by applying heat to the entire surface of the body, by cuppings and hot applications over the kidneys, by the frequent use of small doses of calomel or sulphate of magnesium until the bowels begin to move, and by drugs which lowered arterial tension. The latter (chloral, opium and aconite), in small doses, were also to be used in case of the occurrence of cerebral symptoms.

The speaker's routine treatment consisted of confinement to bed and a fluid diet, daily washing of the entire skin, and the giving of drachm doses of sulphate of magnesium every hour for two days, or till an ounce was taken, or till the bowels were moved. He expected to see the albumen in the urine lessened within a few days, the pulse soft, the dropsy gone, but a condition of anæmia quite noticeable. Solid food was then gradually introduced in place of milk, and iron and oxygen were given.

In subacute nephritis the thing at fault in the performance of the renal function was not the quantity of urine (for this was often excessive) but its quality. That is, as the disease went on, the proportion of solids became constantly less, and the symptoms were largely due to the effects of the nephritis on the composition of the blood and on the bodily nutrition. Anæmia, dropsy, and loss of strength were the most prominent symptoms. Cerebral symptoms were more of the chronic sort. Recovery was not to be expected here, though intermissions and a very slow course were frequently met with. The conditions demanding treatment were: 1. The nephritis itself. 2. The nutritive changes. 3. Dropsy. 4. The arterial state. 5. The cerebral symptoms. 6. Acute attacks or exacerbations.

For the nephritis an outdoor life in a warm climate was the best treatment. In a cold climate these patients must stay indoors most of the time. The diet should ordinarily consist of solid foods and of fats. Excess in the use of mineral waters and of milk was to be avoided. Opium and the bichloride of mercury might be of some benefit. For the anæmia his remedies were the inhalation of oxyen, iron internally, massage, and the relief of constipation. Where the regulation of the diet and fluids drank, and the treatment of the anæmia, did not relieve a dropsy, and the latter was a cause of real distress, such measures as purging, sweating, and puncturing might be employed; but this would be necsary only in unfavorable cases. The point to keep in mind was that it was not well, when a patient was secreting about seven grains of urea to the ounce, to increase the amount of urine passed beyond what would enable the patient to secrete his normal five hundred grains of urea per diem. The amount of fluids taken should not exceed the amount of urine passed.

It was not well, in his experience, to increase a low arterial tension by digitalis or ergot. Increased arterial tension should be relieved at once, as the condition of the arteries and the excretion of urea seemed to determine the severity of the cerebral symptoms.

Clinical Notes of Sulphonal.

WE have already called attention to the fact that the indiscriminate use of sulphonal as a hypnotic, without fear of evil results, is not substantiated by facts. Dr. S. Grover Burnett (in the *New York Medical Journal*, March 2, 1889,) publishes notes which further confirm these statements. He first experimented on himself, taking 30 grains, and, while sleep was produced in an hour and lasted for eleven hours, he awoke with dizziness, which passed away on rising; but he sufferered from muscular weakness which lasted all day, his co-ordinating powers being quite defective. He has used it in sixteen cases of mental disease of various kinds, with good results in seventy-five per cent. of the number experimented upon, but in all cases of melancholia and one case of epileptic insanity the results were less satisfactory. In melancholia the dose had to be repeated during the night, and then only from two to four hours' sleep was obtained. To a patient with melancholia with great mental disturbance a dose of thirty grains was given at bedtime; the patient did not sleep, and the dose was repeated at 2 A.M.; patient then slept till 1 P.M. On waking, refused food and complained of nausea. Became restless at bedtime and the dose was repeated; slept all night and was aroused with difficulty at 9 A.M. Was cyanotic; pulse 60, weak and compressible; respiration 16, and laborious; temperature 98° F. Remained cyanotic and semicomatose for twelve hours, taking no food. On the following day the temperature was normal, respiration 20, pulse 80, taken in same attitude. Patient is 59 years old, suffers from arterio-sclerosis with compensatory cardiac hypertrophy, to which condition Dr. Burnett attributes the severity of the symptoms, and he thinks the patient would not have survived another dose within twenty-four hours.

To a lady, 42 years old, suffering from insomnia due to worry, thirty grains of sulphonal were given at bedtime for a week. It produced good sleep, but was followed each morning by anorexia, slight headache, and, on the fifth day, by muscular inco-ordination. These symptoms gradually increased, becoming so severe on the seventh day that the medicine had to be discontinued. In three cases it produced extreme thirst, dry and parched condition of the mucous membrane of the mouth, partial suppression of the salivary secretions, anorexia, and, in two cases, pronounced emesis. Dr. Burnett believes that sulphonal is a reliable hypnotic in the various psychoses free from states of depression, such as mania, the maniacal stage of paresis, delusional insanity, etc., while it is less suitable for cases of melancholia with pronounced depression; is contraindicated in arterio-sclerosis concomitant to a psychosis. He believes that it is accumulative, producing a more profound effect after the third dose, six to twenty-four hours apart, and in a small number of cases produces disorder of the digestive secretions.

While the cases in which sulphonal has failed to produce the expected result, or has even been followed by unfortunate consequences, are rapidly multiplying, it is earnestly to be hoped that the drug will not on this account fall into disrepute. In our minds it is without doubt one of the best hypnotics, but like all powerful agents can not be used ndiscriminately. In some cases its use is positively counterindicated, and in others it will fail; fortunately we are now beginning to recognize on clinical grounds the restrictions which should govern its use. Further, our acquaintance with its physiological action is becoming more intimate, and has been considerably improved by the report of a number of experiments made by Dr. William F. Shick in the private laboratory of Dr. Ott as to the physiological action of sulphonal $(SO_2C_2H_5)_2$, from which the author draws the following conclusions (*Journal of Nervous and Mental Diseases*, January, 1889):

1. It does not affect the irritability of the motor nerves.
2. It does not alter the muscle curve.
3. The sensory nerves are left intact.
4. It depresses reflex activity mainly by an action on Setschenow's centres; occasionally it exalts reflex excitability.
5. It acts as a narcotic.
6. The pulse is usually somewhat accelerated.
7. The arterial tension, after a temporary fall, is considerably increased.
8. Respiration is depressed; section of the vagi does not alter the effect.

These facts lead him to believe that sulphonal will replace chloral to a considerable extent. The well-known dangerous action of chloral as to heart and respiration is avoided with this drug, and, if the narcotic effects are equal, sulphonal should have the preference. While he has seen the heart paralyzed by the drug in a few minutes, yet it was due to the sudden action of the drug by the jugular, and perhaps partly to some of the drug being thrown down on account of its insolubility, for the solution was somewhat warmer than the temperature of the blood.—*Therapeutic Gazette*.

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Early Diagnosis of Lateral Curvature of the Spine.

BY JOHN RIDLON, M.D., NEW YORK CITY.

Read before the Surgical Section of the New York Academy of Medicine, October 8, 1888.

UPON the early diagnosis and the rational treatment of the conditions presenting in lateral curvature of the spine will depend the successful or unsuccessful termination of the case. When the distortion has advanced so far that the diagnosis is made by the dress-maker or some lay-friend, it may fairly be said to have passed the time for an early diagnosis, and generally passed the time for a complete eradication of the deformity.

It is not easy to say how early a case of lateral curature can be diagnosticated. I am inclined to think that it will depend upon the cause of the curvature; for upon the cause will depend the first symptoms. A curvature following and depending upon one of the fevers, as scarlatina or typhoid, will present early symptoms differing greatly from those of a curvature following a pleurisy and depending upon the contraction of the pleuritic exudation, although, when well advanced, the distortion is in no way different. So, also, a case depending upon a shortening of one lower extremity, congenital or acquired, will, in its early symptoms, differ from one due to poliomyelitis anterior, although both may progress to the same characteristic deformity. In a word, a case may begin with curvature and rotation, or without curvature, or without rotation, or without either curvature or rotation, and still present diagnostic symptoms.

An early diagnosis may be characterized as such when there is as yet no deformity of the spine, or only such deformity as can by posture or manipulation be temporarily eradicated. A deformity which at the first examination, can not be made to disappear, will pretty generally resist treatment, at least so far as the primary cure is concerned; although some do remarkably well, as will be seen in the case which I shall present to demonstrate the exercises.

In a case in which there is actual bony anchylosis of the vertebræ on the concave side, we can not hope in any measure to change the primary curve, although much can be done to render the deformity apparently less by reducing the prominent hip and the compensatory curves above and below the area of anchylosis.

A successful termination may mean an eradication of the deformity and an erect and graceful carriage, or only an arrest of the primary and a reduction of the secondary curvatures with increase of health and strength; or it may mean any degree between these extremes; a termination is not considered successful which leaves the patient encumbered with a brace or jacket, and with muscles so weak and flabby that the supported position can not be maintained when the support is removed; neither do we consider as successful, cases that present a greater deformity at the end than at the beginning of the treatment.

By rational treatment is understood the attempt to meet indications, as presented by causation and symptoms, in each individual case, with the end constantly in view to restore the figure so far as possible to the normal contour, and so to strengthen the muscles that this normal contour may be easily and instinctively maintained. Routine treatment of any kind is to be deprecated, but the routine treatment of every case of lateral curvature, no matter what its cause or how varied its symptoms, by any one kind of brace or any one exercise, is opposed to our idea of rational treatment.

Rotation of the vertebral bodies, causing the convexity and the concavity—the bulging and the falling in—is the characteristic symptom of this deformity, and in a very large number of cases it appears very early. This bulging can be best seen by causing the patient, stripped to the hips, to bend forward, the arms hanging and the knees straight and rigid. But even before this rotation can be detected there are, in some cases, characteristic symptoms: as the patient walks, if unconscious of observation, the head is carried somewhat to one side, the shoulder of that side is slightly advanced, and the foot of the same side is rotated out.

If the patient is asked to lie down upon some plane surface, as a table or the floor, and is simply told to "lie straight," this carrying of the head to one side and outward rotation of the foot will become more easily apparent. If, then, with the arms straight and the elbows and wrists rigid, the patient is made to grasp a stick lying across the thighs, with the hands so far apart that the arms are parallel, and is directed to carry the stick forward and upward over the head, it will be seen that the plane through which either arm passes is not parallel with the anterio-posterior plane of the body, but that, as the arms pass upward, they will swerve to one side—the side toward which the head leans and the foot points. If the surgeon now grasps the stick between the patient's hands when it is resting on the thighs and forcibly makes the arms follow planes parallel to the anterio-posterior plane of the patient's body he will distinctly see and feel the stick twist in his hand. At starting, one end of the stick will be lower than the other, that is, farther down the thigh, and that arm appear the longer arm; when it has passed through ninety degrees and is opposite the face, the other arm will appear the longer, and when it has been carried ninety degrees more, the first arm will again appear the longer.[*] This phenomenon appears to depend upon the advancing of one shoulder beyond the other, and, together with the deviation of the head and the rotation of the lower extremity, can doubtless be traced to the same central lesion that causes the subsequent vertebral rotation.

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[*] This latter condition is reversed when the deformity has progressed so far that one shoulder is higher than the other.

In cases in which these symptoms have been noted, distinct rotation has been observed for a very considerable time before any lateral deviation of the line of spinous processes began to appear. On the other hand, when the lateral deviation appears before rotation, as in curvature depending upon one short lower extremity, I have not found the neck and shoulder symptoms and the outward rotation of the foot.

It may be asked if *true* scoliosis can be caused by a short leg or a contracted pleural cavity, and I should answer, in the present uncertainty as to the etiology of true scoliosis, that lateral deviation of the spine with rotation of the vertebræ, and all the characteristic forms in the late stage do follow, and may undoubtedly be caused by, a short leg or a contracted pleural cavity, and that such a curvature is to all intents and purposes as true a scoliosis as one that comes without known causation.

For the sake of greater clearness in arranging symptoms, I shall divide our cases into two classes: (1) those that present rotation before curvature, and (2) those that present curvature before rotation.

In the first class, in which rotation appears before the curvature, the symptoms generally appear in the following order: Outward rotation of the foot on the side toward which the convexity is to look—this is more marked when the patient lies supine than when he is standing; the head is carried somewhat toward the same side; the shoulder is carried forward, separating the scapula from the line of the vertebral spines farther than on the opposite side. If the patient be a woman with mammæ developed, there will be found on palpation atrophy of the gland on the side of the advanced shoulder. Then comes bulging of the ribs on this side and sinking in of those on the other side—this is best seen when the patient bends forward. About this time comes the lateral deviation of the line of the spinous processes. I shall not venture an explanation why this is more frequently seen in the dorsal than in the lumbar spine, and more frequently to the right than to the left. As the curve increases the shoulder of the concave side drops lower than that of the convex side, and either a compensatory curve appears in the lumbar region, or the hip of that side becomes elevated and prominent. When there is a compensatory curve in the lumbar region it is the hip on the side of the convexity of the primary curve that becomes prominent. As the bulging of the ribs increases, the shoulder on that side is carried further forward, and the lower angle of the scapula is tilted out in marked contrast to the one on the opposite side, which lies abnormally flat against the sunken chest wall. If the deformity is far advanced this scapula on the convex side can not be carried back into place by any effort of the patient; while if the deformity is not far advanced it can be pretty nearly replaced. After a time the compensatory curve, which at first was only a lateral deviation, undergoes rotation, and it may even become rigid. Lordosis, also, is of not infrequent occurrence. In some few cases there is found to be some degree of shortening of the muscles of the calf of one or both legs, and even a slight degree of talipes equinus.

The symptoms above enumerated may go progressively on to almost any degree of deformity, or they may cease to progress at any time, either with or without treatment. One patient, for instance, wore a brace for some two years, and grew gradually worse. She was then treated for some months by electricity and certain passive manipulative exercises, with little or no gain. During the following two years she had no treatment, yet the progress of the distortion stopped and she became somewhat straighter. Another patient wore the same brace and had passive manipulative exercise for about ten months, during which time she grew gradually worse; but with the brace removed and under active manipulative exercises and gymnastics she became rapidly straighter. The progress of the distortion is sometimes very slow, going on for upward of ten years; in other instances the same degree of deformity may be reached in a few months.

In the second class of cases, in which the curvature precedes the rotation, the first symptom appearing is the lateral deviation of the line of the spinous processes. This, however, is not usually noted, since the curve, not being rigid, is not permanent; and the symptom which is usually first noted is the prominent hip. Not infrequently, however, we can obtain a history of an uneven gait and a faulty habit of standing or sitting in a flabby and rapidly growing child. The relation of the prominent hip to the curvature, that is, to the convexity or concavity, will depend on the location of the curve. If it is lumbar, the prominent hip will be on the side of the concavity; and so it will be if there is only one curve occupying most of the dorsal and lumbar spine; whereas, if there is a double curve, to the right in the dorsal and the left in the lumbar spine, the prominent hip will be that on the side of the dorsal convexity. After a curvature of this kind has existed for a certain time, usually many months or some years, rotation supervenes and with it all the consequent symptoms; bulging of the ribs on one side in the back and of the other side in the front; flattening of the ribs of the first side in front and of the opposite side in the back; tilting out of the lower angle of the scapula and elevation of shoulder on the side of the convexity, and flattening of the scapula and lowering of the shoulder on the side of the concavity. In this class we have not found outward rotation of the foot, and the peculiar advanced shoulder during locomotion, which is so often seen in the cases of the first class; but the lateral deviation of the head appears subsequent to the lateral deviation of the line of the spinous processes. It is very doubtful if true mammary atrophy occurs in the cases of the second class, but I have observed a smaller but not flabby gland on the side of the convexity. A considerable number of patients also present a condition of flat-foot.

The spinal rigidity comes slowly as compared with the cases of the other class, and these are, therefore, by so much, more amenable to treatment. In the cases in which there is a short lower extremity it is an advantage to have the length equalized by a high shoe, but this is not absolutely necessary for a good result. In cases in which the deformity is due to, or associated with, the contraction of a pleuritic exudation great care should be exercised in the use of active manipulation, lest the inflammatory process be renewed again.

Treatment should consist in the reduction of the deformity, and the development of the muscular strength to maintain the acquired position. This is gained by posture, manipulation, massage, and gymnastics with assistance and with resistance. In many cases electricity is of use, and the proper arrangement of the clothing is of no small importance; but of more importance than any other one thing I believe to be the constant maintenance, *by voluntary effort*, both during the exercises and in the interval between the exercises, of the *best possible position*--the "key-note position" of Roth. As to the use of braces, supports, jackets and corsets, it is difficult to lay down any uniform rule. In some cases they are unnecessary, in some even harmful, while in some they are of great comfort to the patient; but it should not be lost sight of that their use is prejudicial to muscular development, and delays the ultimate favorable result.—*Med. and Surg. Reporter.*

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Surgical Clinics at the Western Pennsylvania Hospital.

BY PROFESSOR J. B. MURDOCK,

SURGEON TO THE WESTERN PENNSYLVANIA HOSPITAL AND PROFESSOR OF CLINICAL SURGERY IN THE WESTERN PENNSYLVANIA MEDICAL COLLEGE.

[Reported by WILL. N. PRINGLE, M.D., a member of the Graduating Class.]

December 8, 1888.

OPERATION ON A CRUSHED HAND.

The case which we will show you first to-day is one of those very frequent accidents that we see—namely, a railroad crush. This young man was following his occupation as a railroad brakeman, last Sunday, six days ago, when he had his hand crushed in the terrible manner which you see. He was brought here; but he stoutly objected to an amputation, and his father, who was with him, also refused to give his consent to an operation. He has, however, seen the error of his way, and now wants an operation done, and an operation that should have been done six days ago will be done now.

Amputations are divided into three periods in regard to the time of their performance, namely: the primary, the secondary, and the intermediate. In cases where a limb is hopelessly lost, all authorities now agree that the sooner it is removed the better. In these cases, in this institution, we operate at once, just as soon as the patient comes under our care; provided, of course, that he is not in profound shock, and not actually dying. And, by carefully examining the statistics of the hospital for the last twenty years, we find that the mortality is wonderfully decreased by so doing. And just here let me say, that the comparison of the records of other hospitals with the records of this hospital shows that more amputations are done here than are done in any other hospital in the United States; and further, that, according to the number of patients treated, more amputations are done in the Western Pennsylvania Hospital than are done in any other hospital in the world. This statement is the result of careful researches and examinations of records and statistics of this and other countries.

Now, in cases of accidents, the question you will often be called upon to decide will be, "Is amputation required or not?" While we try to practice conservative surgery here, and try to teach you conservative surgery, we desire to teach you that *intelligent* or *practical* conservatism which is such a priceless boon to him who possesses it. To illustrate, you see the middle finger of this crushed hand. Although the bones are not broken, the soft parts are contused and lacerated almost its entire length. One kind of conservatism might save that finger. The man would be compelled to remain in the hospital for six weeks, then carry it in a sling for six months, and at the end of that time have a stiff, crooked, useless member, which would continually interfere with the performance of his duty, and perhaps in one year he would come back that we might remove the unsightly, useless member. This is not the conservatism that we would teach you. A member that is preserved merely to hang to the body of the patient as a useless, unsightly encumbrance, and to interfere with the proper performance of his duties, or station in life, does not exhibit the practice of true conservative surgery. I will remove the index and middle fingers of this hand at the metacarpo-phalangeal articulation, and in order to get skin enough to make good flaps, will saw off the head of the metacarpal bones. This will leave the man a reasonably useful hand, because he has his thumb remaining, as well as his fourth and fifth fingers. I think that the loss of a thumb is almost equivalent to the loss of a leg, because the remaining fingers, having no opponent, are thereby rendered almost useless also. This hand will be dressed in the usual manner, with antiseptic dressing, and we may bring him before you again.

EXCISION OF THE METATARSAL BONE.

We have another case here which will serve as an example, and a warning in regard to the care of the feet. This old gentleman is an Irishman 65 years old, a daily laborer, and resides in that odorous as well as historic locality known as "The Point," and within a short distance of old Fort Duquesne. He was a gay young man at one time, fond of dancing and of wearing tight shoes; and as a result we see such a deformity of his feet as it is but rarely our privilege to behold. His great toe lies almost traversely across the second and third toes, and these, together with the fourth toe, are all dislocated at their metatarso-phalangeal articulation. The elastic spring of the foot is lost, and he walks on the base of the phalanges, over the site of which bunions have formed, which have become so painful that he can only walk with great pain and difficulty. In buying a shoe, the sole should be at least as wide as that of the foot. It seems that people will subject their feet to more pain and agony, for sweet vanity's sake, than they will any other part of their bodies. It is no rare thing to see women especially with narrow heels on their shoes, two inches high, not under the heel of their foot, but under the middle of their foot, and their toes all cramped down into the point of a narrow shoe, causing corns, bunions, warts and deformities, and not unfrequently dislocating the tendon of the tibialis posticus muscle where it passes behind the malleolus; and not only all of these, but the general health suffers, because they who can not walk can not take that exercise so conducive to perfect health.

In recent deformities of this kind, or where the deformity is not great, no operation is required. In these cases Dr. Lewis A. Sayre puts a rubber stall over the toe, and to this attaches a strong piece of elastic rubber, and to this fastens a piece of adhesive plaster. The toe is then brought into line, and the plaster fastened to the heel, thus, through the elastic, keeping up a steady traction on the toe.

Now, we propose to do something to relieve this gay Lothario, and but one choice is left us, namely: excision of the metatarsal bone. There are two ways of doing this, however. One way is to open the joint and excise the head of the bone; the other way is to remove a piece from the shaft of the bone below the joint. I propose to open the joint and excise the head of the bone. There are two incisions that may be made here, a straight or an oval; but, as I think I can expose the head of the bone with considerable ease, I will make a straight incision. After the head of the metatarsal bone is removed and the toe brought into position, the base of the phalanx and the sawn surface of the metatarsal bone will be held in close opposition by wires passed through both bones. I will also excise the head of the second, third and fourth metatarsal bones. By a little attention the foot may now be made to present a reasonably good appearance. It will be retained in as good a position as possible by bandages, and in a few weeks this man will have less distress in walking, although he may still not have a perfect foot.

December 22, 1888.

I will show you first to-day the case in which we excised the head of the metatarsal bones of the first, second and fourth toes, two weeks ago. You remember the great toe lay directly across the ends of the second and third toes, and that the toes were all dislocated at their metatarso-phalangeal articulations. You see now that the toes all present a reasonably good appearance, and that the great toe is in a line with the inner border of the foot, as it should be. The original dressing put on this foot was not disturbed till the end of ten days, when it was removed, and the condition you see here was presented. There is still a wire suture remaining in the wound, but if the wire does not disturb the man we will not disturb the wire.

OPERATION FOR TUMOR ON THE FACE.

The next case is one of tumor occupying the side of the face, or overlying the parotid gland. This man says that it has been growing for twenty years, but that ten years ago it was removed or partly so, but that it began to grow again, and has continued to increase slowly ever since. You can see the cicatrix where it was opened before. Now, the growths that may occur in this locality are various, as enlarged lymphatic glands, enlarged parotid gland, encysted tumor in the parotid gland—and this latter is what I believe this to be. If this is the case I will not likely be able to remove it whole, as it will likely rupture or tear, and the contents be evacuated. In that case I will make an effort to remove the sac by cutting, dissecting or tearing it out. If I am unable to do this I will simply cut off the outer portion, insert a drainage-tube, and sew it up. In removing tumors it is always well to make a free incision through the skin, in order to give yourself plenty of room, then cut down carefully until you find the capsule and cut through it; however, as I do that in this case, the sac is torn and the contents consist of a large amount of colored blood plasma. I find that the sac is very intimately attached to the surrounding structures, and that the parotid gland is involved in the mischief. If it were not for the long standing of this growth, I would look upon it with suspicion; and as it is, I am not satisfied that it is not a malignant growth. We will wash the cavity out with bichloride solution and provide free drainage, and make an effort to convert it into an abscess and prevent its return, provided it is not malignant.

It is very unsatisfactory to begin an operation and not be able to finish it. You should not begin an operation with so much determination that you can not stop, when you find that it is to your patient's detriment that you go any further. This is frequently done by surgeons, especially in laparotomies. They open the abdomen expecting to find a certain tumor, or condition, and failing to find what they expected, they cut, and probe, and search for what they wish to find, until they do irreparable injury to their patients. Always be prepared to finish an operation when you find that you can do no more good, however unsatisfactory it may be.

FRACTURE OF THE TIBIA AND FIBULA.

We have here another case, a man with a fracture of the tibia and fibula, at their lower third. You see we have all of the symptoms of fracture here. Now this was done by direct violence (this man was struck with a stone), and is much more dangerous than if it had been done in jumping from a height, or any other indirect violence. It requires a much longer time to heal. We had a man in the wards here last summer, who was struck with a brick, and it was six months before it healed. In cases like this, where there is so little swelling and tumefaction, it has been our practice to incase the limb in a plaster dressing at once, but it has been my fortune to see a good many cases of delayed union follow this practice, so I am beginning to look on it with suspicion. It may be that a sufficient amount of blood is not sent to the part under a plaster dressing, or that this dressing in some other way interferes with perfect union. I am, therefore, inclined to try the other way for awhile in cases of fractured leg from direct violence, or until the same bad results convince me that the early dressing in plaster is not in some way responsible for the delayed union. This limb will therefore not be dressed in plaster for four or five days more. It is now two days since the accident occurred.

OPERATION FOR INJURY TO THE FOOT.

Another case is that of a boy who six months ago fell from a hay-loft, injuring his foot. The leg and knee soon became swollen, and when the swelling subsided the numerous openings you see appeared over the front part of the leg. These openings have a pouting appearance, peculiar to themselves, and they are called "cloacaes," from their fancied resemblance to the anus of the hen; they always lead down to dead bone. As I pass the probe down I come in contact with dead bone at once. You will also notice another defect in this leg, namely, that it is bowed outward. This is caused by the fact that part of the tibia has been lost through necrosis, and the entire weight coming on the fibula, it has given way, or bent from the pressure, causing the bowing of the leg. Now we propose to cut down on the tibia and remove the necrosed bone, and in order to cause the sole of the foot to rest flat on the floor we will fracture the fibula, and allow the fragments to overlap each other to a small extent, thus reducing the length of the fibula to that of the tibia. I will make an incision, clear down on to the bone, and then with a periosteum elevator, lift up and preserve the periosteum. You see that the tibia is separated at its epiphysis above the ankle, and with very little force I am able to remove a sequestrium about eight inches long, and almost a perfect mold of the tibia, except where it has been destroyed by the disease. It is the most perfect specimen of sequestrium that I have ever removed from so small a limb. I will pack the cavity with iodoform gauze, and leave the lower one-third of the wound open for the purpose of drainage. The boy, I think, will have a reasonably good limb, although amputation of the limb was at one time considered necessary.

EXTIRPATION OF AN EYEBALL.

January 5, 1889.

I have a patient to-day for whom I will extirpate an eyeball. This, properly, should be done by the ophthalmologist, but as this is an operation which you may all be called upon to perform in your practice, I thought proper to bring the case before you to-day. Besides, if all the accidents to the eyes are given to the oculist, and the gynecologist does all the operations falling within his line, and the genito-urinary specialist is given all cases peculiar to his practice, and all the other specialists get their share, there will be but little left for the general surgeon. I, myself, am a specialist, and my specialty is, as Mr. Wilson once said, the skin, and all it contains. When the eye is hopelessly destroyed it should be removed. Because, in the first place, an artificial eye may be better worn, and in the second place, the inflammation and the pathological changes which are set up, are capable, by sympathetic action, of destroying the sound eye. And although the inflammation may be subdued for the time being, and the useless member allowed to remain, still at any time, and from slight provocation, a new inflammation may be set up and the sound eye be quickly destroyed. This man was struck in the eye by a piece of steel, six years ago, and had his eye destroyed. It did not, however, give him much trouble until within a few days, when a new inflammation attacked it, and which is now slowly invading the other eye. The man has applied to us for relief, and extirpation has been decided upon. In doing this the wire speculum is inserted to hold the lids apart. The conjunctiva is then picked up with a small forcep and cut clear around, near the cornea. The recti muscles are then all divided, as close to the sclerotic as possible, and the eye will then bulge forward. You then use a pair of curved scissors to cut off the optic nerve. Of course, when about to do the operation, you will be careful about the eye you are going to remove. Surgeons have been known to remove the wrong eye. This would be a great mistake. After the recti muscles are all divided you introduce the scissors, closed, and feel for the optic nerve. I prefer to introduce them on the nasal side, as the nerve is nearer that than the other side. When you have found the nerve the scissors are opened sufficiently to grasp the nerve and snip it off, as I do here. After the nerve is divided the oblique muscles still remain, which I will divide close to the sclerotic, when the globe is removed with ease. The eye should, where possible, be removed before the humors are allowed to escape, as it is done with less facility when emptied of its fluid. If there is any bleeding in the wound a little water usually controls it; not, then a cotton compress held in the socket by a bandage is sufficient to control any hæmorrhage there is likely to be. In about three or four weeks this man can be fitted with an artificial eye. He will for the present be kept quiet and his eye kept bandaged.

AMPUTATION OF THE LEG.

We will next show you a boy for whom I amputated a leg just twenty-four hours ago. There has been some rise of temperature, and some soiling of the dressings, so I will take the dressing down and ascertain, if possible, the cause of this disturbance. As I inserted a rather large drainage tube I will now remove it. I think that by this time the serum is all drained from the wound, so that it will not suffer by the removal of the tube. The wound will then be redressed and not disturbed for two, three, or perhaps for four weeks, unless another rise in temperature should indicate that all is not going on well. A large amount of dressing should be placed over wounds like this, so as to absorb all the fluids that may come from the wound, because the moment that the blood shows itself on the outside of the dressings, the danger to septic infection at once begins, as the germs more easily penetrate the dressing. It is for this purpose that we use such large amounts of absorbent cotton. And in regard to bandages let me say here, that the ordinary crinoline bandages are the best for wounds like this. When applied wet they adapt themselves nicely to all inequalities of the surface, and when they afterward become dry the sizing which is contained in their meshes acts in a modified degree like the plaster in a plaster dressing, making a firm and altogether very excellent dressing. For fractures where you wish to hold parts in apposition, or where you wish to retain splints, or make pressure, the ordinary unbleached muslin makes better bandages. This wound will now be redressed, antiseptically, much the same as an original wound, with the exception of a drainage-tube, and we anticipate no more trouble from it.—*Medical Progress.*

The Treatment of Locomotor Ataxia by Suspension.

BY WILLIAM C. KRAUSS, B. S., M.D., ATTICA, N. Y.

In his lesson of March 8, 1889, Charcot discussed the results obtained by suspending patients affected with locomotor ataxia. (For the modus operandi, see *Le Progres Medical*, January 19, 1889, and February 23, 1889. A translation of the latter paper by Dr. Angell appeared in this Journal April, 1889.)

Some five months had then elapsed since this method was introduced in the Salpêtrière, and ninety-one patients were under observation. (This number had increased to 176 April 3, 1889.)

Charcot considered this number, and the length of time, five months, as sufficient to formulate some notions as to the efficacy of this manner of treatment.

The patients who were first subjected to this treatment have shown a gradual and satisfactory improvement in some of the symptoms, but in no case has anything been obtained looking toward a complete recovery. Charcot strongly insists not to consider this mode of treatment curative, but only palliative. By so doing, not only the patient, but also the physician, will be content with the relief obtained.

The symptoms most generally improved are those of the spinal cord; symptoms due to the lesion in the cerebrum and medulla remain unchanged. In the great majority of cases, the lancinating pains of the legs are the first symptoms which yield to this treatment. Generally after ten to fifteen suspensions, the patient finds marked relief. In many cases these pains may disappear altogether. The disappearance of these pains in a case of Potts' disease with tabes undergoing suspension, first suggested to Motchoukowsky the application of the Sayre apparatus to locomotor ataxia. The paresthesia of the feet and legs disappears also quite early. Patients lose the queer sensation of walking on a soft, spongy substance, and again feel the firm, hard surface. The girdle pain remains obdurate, as in only one patient was there any relief obtained. Romberg's symptom shows a gradual improvement, although in no case can it be said to have entirely disappeared. Westphal's symptom persists, no change whatever having occurred in the condition of the reflexes. The gait, however, is markedly changed. Patients who formerly came to the Salpêtrière with much assistance, are now able to come alone, unassisted; in some cases coming from a great distance through the crowded city. The vesical and sexual functions resume, in the majority of cases, their former activity. On the other hand, the ocular symptoms remain unaffected, no improvement or change having been noted. The same applies to the other head symptoms.

It is thus evident that in those cases where the spinal symptoms predominate, and this is the rule, marked improvement may be obtained, Whether this improvement shall be lasting, or only transitory, can not as yet be said; the patients first to undergo suspension have reported no relapses, no recurrence of former symptoms. While all spinal symptoms are not alike improved, still any relief in some one of the obdurate symptoms of locomotor ataxia is gratefully welcomed by the patient.

As to whether suspension is only an experiment of short duration, or whether it will take a place in the treatment of locomotor ataxia, depends on how much is expected of it. Considered as a curative agent, it surely will disappoint. Considered as a palliative agent, the patient himself, reflecting upon his condition in former days and that of to-day, will pronounce it the only remedy that gives so much relief in so short a time.

Charcot has also applied suspension in other diseases of the nervous system. In two cases of Friedreich's disease, gratifying results have been obtained. In spastic paraplegias the first application seemed rather to aggravate the symptoms. Subsequent suspensions have, however, proven beneficial. In Parkinson's disease (paralysis agitans) the patients have experienced much relief. Two cases were under observation, and both are well satisfied with the results of the suspension. The rigidity and stiffness have given way to a great degree. The sensations of *chaleur* (flushings) have abated, the sleep is improved, and the gait has become less fatiguing.

The tremor, however, has shown no sign of disappearing, but remains as persistent as ever.

Microscopy.

Micro-Organisms, and their Relation to Disease.

BY SAMUEL N. NELSON, A.M., M.D., OF BOSTON, MASS., SURGEON TO THE SOLDIERS' HOME IN MASSACHUSETTS.

Read before the American Academy of Medicine, and Approved by the Council for Publication.

THE rôle of the microörganisms called bacteria is at present probably occupying the attention of more scientific men than any other subject in modern science. Great numbers of observers are at work on both continents in the solution of the *germ theory of disease.* Comparatively unknown till within a few years, on account of their very minute size, these microörganisms attracted attention and experimentation chiefly when the improvement of the microscope allowed objects of their size to come within the limits of its powers of observation. At first simply recognized as existing, their persistence and universality demanded question as to what they are, their origin, and object.

The history of these microörganisms is related to that of spontaneous generation, to that of the fermentations, to the pathogeny and therapeutics of a great number of virulent and contagious affections; and in a more general manner to all the unknown which, notwithstanding the efforts of modern science, still surrounds the origin of life and its preservation.

The bacteria are the lowest of organisms, belonging to the vegetable kingdom, and are thus defined by the botanists, who have most recently occupied themselves with them; "Cells deprived of chlorophyll, of globular, oblong or cylindrical form, sometimes sinuous or twisted, reproducing themselves partly by spores and by transverse division, living in isolated or in cellular families, and having affinities which approach them to the algæ, and especially to the oscillariæ."

The atmosphere transports myriads of microscopic plants and animals. M. Miquel has pursued interesting studies upon them. M. Pouchet has devised the aëroscope, that bears his name, for collecting dust from the air which contains remnants of articles that we use, existing in the condition of impalpable dust, also pollen of plants, particles of mineral matter, and the spores of cryptogams, the moulds and algæ. Some micrographers have suggested that germs may be transported by the vapor of water; but Miquel's experiments show that the evaporation from the ground never carries any schizomycetes with it. On the other hand, dry dust, especially from hospitals, etc., is charged with microörganisms. The greatest labors, however, have been employed concerning a different class of organisms than the algæ and moulds. The plants comprising this group, under the common designation of *bacteria*, in consequence of their extreme minuteness and refractive power, are invisible in the preparations of the aëroscopes, and are recognized only by the higher powers of the microscope.

The first observer who recognized the microörganisms was Leeuwenhœck, as early as 1675. While examining with his magnifying-glasses a drop of putrid water, the father of microscopy remarked with profound astonishment that it contained a multitude of little globules which moved with agility. During the following year he observed the presence of bacteria in feces and in tartar from the teeth.

M. Cohn is a naturalist who has occupied himself very much with the bacteria. In 1853 he published his first researches upon this subject, and twenty years later there appeared a series of "Memoirs" devoted to these organisms. In the first paper he gives an exposition of his researches upon the organization, development and classification of the bacteria, and upon their action as ferments. His classification is:

1. The sphærobacteria, or globular bacteria.
2. The microbacteria, or rod bacteria.
3. The desmobacteria, or filamentous bacteria.
4. The spirobacteria, or spiral bacteria.

This classification has probably been accepted by more germ theorists of to-day than any other classification.[*]

The smaller spherical bacteria may be confounded with various objects; *e. g.*, molecular granules, fat globules, amorphous precipitates, etc. To distinguish these pseudo-bacteria Nägeli says: "There are but three distinctive signs which enable us to recognize with some certainty that the granules under consideration are organisms: spontaneous movement, multiplication, and equality of dimensions, united with regularity of form." To which may be added the action of re-agents.

The atmosphere is laden with these microörganisms. Developing in the organic infusions into which they fall, they soon determine their complete decomposition; for during their growth bacteria live upon the nutritive material, as all other plants do upon their soil. This is putrefaction, and they are always present as the cause. As is well known, bacteria are always present in some form or other in fermenting liquids. Fermentation only occurs after the access of particles from the outer world, and it is asserted by the supporters of the germ theory that these particles are organisms or their spores, and that it is by the growth of these organisms in the fermenticible material that it undergoes alteration. The essentials for the production of new forms are a putrescible body, water and air; while heat, light and electricity favor the process.

As Sir William Roberts says: "Without saprophytes there could be no putrefaction; and without putrefaction the waste materials thrown off by the animal and vegetable kingdoms could not be consumed. Instead of being broken up, as they are now, and restored to the earth and air in a fit state to nourish new generations of plants, they would remain as an intolerable incubus on the organic world. Plants would languish for want of nutriment, and animals would be hampered by their own excreta, and by the dead bodies of their mates and predecessors—in short, the circle of life would be wanting an essential link. A large proportion of our food is prepared by the agency of saprophytes. We are indebted to certain bacteria for our butter, cheese and vinegar. Our daily bread is made of yeast, and to the yeast plant (discovered in 1836 by Cagniard de la Tour, and also independently by Schwann about the same time) we also owe our wine, beer and spirituous liquors. As the generator of alcohol, this tiny cell plays a larger part in the life of civilized man than any other tree or plant."

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[*] The classification proposed by Koch is now quite universally accepted. The term *bacteria* is used in the general sense, including both the *micrococci* —the ball forms—and the *baccilli*—the rod forms.—*Written since reading of the paper.*

Unfortunately for us, however, they have a powerful potency for evil also, and it is the noble aim of science to be able, by thorough study of the conditions under which that potency is acquired and exerted, to keep it under efficient control.

Much still remains to be determined with regard to the disease-producing possibilities of the germs that in invisible clouds drift in the atmosphere. The more delicate and exact methods of the most recent observers—Koch, Pasteur, Tyndall, Ehrlich, Ogsten, Sternberg and others—with regard to their nature seem to show that there are many varieties of them, each of which has its own conditions of growth, requiring or developing best in a particular soil. Different species multiplying in different media and varying in their susceptibility to different temperatures and to different chemical re-agents. Apparent identity of form does not necessarily indicate identity of nature. They are not convertible into each other. Each species produces only itself, and is produced by itself alone, and when introduced into a substance that affords a favorable soil for its growth, always produces the same results. These results are not produced suddenly, but are of gradual development, progressing with the slow and steady multiplication of the organism. They may be cultivated artificially in either solid or liquid media. The best known and most commonly used solid medium is nutrient gelatine, which unites the advantage of transparency with that of solidity; but it has the disadvantage of melting at a comparatively low temperature. When it is desired to cultivate bacteria at a temperature approaching that of the human body, sterilized blood serum may be used, or a preparation of agar-agar, a Japanese sea moss. The cut surface of a freshly sterilized boiled potato is also a very satisfactory culture medium under some conditions.

For liquid cultures a tube or bulb hermetically sealed, containing a sterilized infusion of hay or meat, is used, which will remain clear indefinitely. When, however, the germs are introduced in ever so minute quantity, they begin to develop, after a varying interval of one to twenty days, and then they rapidly increase. The liquid infusion, previously clear and pellucid, becomes more or less cloudy or turbid. When in this condition, we may be sure of the presence of rapidly increasing microörganisms in great numbers, as the microscope will invariably reveal.

It has been a widely disputed question as to whether bacteria ever occur in the animal in a perfectly healthy state; the affirmative view having been taken by Billroth and some others; but it is denied by Koch, by Pasteur and by Ehrlich, who state that they have never detected bacteria in the healthy animal. The failure of putrefactive bacteria according to experiments, would go to show inability to struggle against the normal cells indigenous to the soil upon which they were planted. Some bacteria showed power of existence only in tissue in which vitality had entirely ceased, while others seemed to possess the power of existence in the presence of the animal cells when the latter suffered from impairment of nutrition, and the tide of life was turning against them. Abnormal composition of the blood seemed to favor the development of some bacteria, after they had found their way into the tissues.

The theory of a causal relation between bacteria and diseased processes has recently received a wide acceptation. In some diseases this relation is established, while in others it is presumed, on the ground that bacteria are found in the blood and diseased products. As additional evidence in favor of special bacteria for different diseases, the fact is advanced that bacteria found in different diseases have been discovered to have different morphological and chemical properties; to which may be added of still greater value, the different appearances presented by the colonies growing upon solid culture media.

Admitting this causal relation of bacteria to disease, it must be demonstrated by successive cultures of the bacteria found to exist in the diseased person, and by the induction of the same disease in man or healthy animals by inoculation, with a reproduction of bacteria. The first discovery of the association of a germ with disease was by Pollender, in 1849, who found certain rodlets in the blood of animals suffering with splenic fever, also variously known as anthrax, charbon, miltzbrand, malignant pustule, and wool-sorters' disease. The specific character of the parasite was afterward pointed out by Davaine (1863), and subsequently carefully investigated and confirmed by Pasteur and Koch. The bacillus can be isolated and developed in proper cultivating media, and when inoculated into some animals will produce splenic fever.

Again, in 1873, Obermeyer, of Berlin, discovered a bacterium in the blood of patients suffering from relapsing fever, which has been named *Spirillum Obermeyeri*. It is found only during the febrile paroxysm, disappearing during the interval. So far, attempts at cultivation have proved unsuccessful.

In March, 1882, Koch, of Berlin, announced the discovery of the *bacillus tuberculosis*, which he asserted to be the exciting cause of tuberculosis. His results have been confirmed by many observers, and the bacilli have been found in the tubercles and sputa of persons suffering from phthisis. As you all know, they reproduce themselves when cultivated under proper conditions, and cause tuberculosis when inoculated into animals.

The discovery of the parasitic origin of glanders followed closely upon that of the bacillus of tuberculosis. This was also made in Koch's laboratory by Prof. Shultz and Dr. Loeffler; and the results were verified by pure cultures and inoculations.

Birch-Hirschfeld has confirmed the discovery of the presence of a micro-organism of syphilis, already announced by Aufrecht, which consists of oval-shaped micrococci in chains.

In gonorrhœa a micrococcus was discovered by Neisser, isolated, cultivated, and, it is reported, successfully inoculated.

Bacteria have also been found in malaria and whooping-cough. A micrococcus has also been found associated with croupous pneumonia, by Friedlander. This may occur singly, but is generally found as a diplococcus.

Von Recklinghausen first described the bacteria of typhoid fever; and Klebs, in 1881, described a large bacillus, which he calls *B. Typhosus*, in which spores are formed in the center, and often at the end. This is carried by the blood and lymphatics, and is found in all the organs. It is more generally believed, however, that the *causa morbi* is a peculiar short bacillus discovered by Eberth. This is rounded at both ends, and has spores. It is found in the ulcers, mesenteric glands and spleen; and has been cultivated by Gaffky. The inoculation of animals has not been successful; but it must be remembered that they do not have the disease spontaneously.

The *Micrococcus Vaccinæ* is very small, only half the thousandth of a millimetre in diameter, and is found isolated or in pairs, and when cultivated forms chaplets. Cohn regards *M. Vaccinæ* and *M. Variolæ* as different races of the same species, but Magnin thinks them identical. In vaccinia they are found in the lymph of the vesicle, and in its borders in the rete malpighi, and were subsequently traced into the subjacent cutis, especially in the lymphatic spaces. The multiplication and extension coincides with the development of the pustule. In variola, Chauveau (1868) first proved a particular non-diffusable active principle; and Cohn (1872) first proved that the lymph contains numerous micrococci. I have myself cultivated the *M. Vaccinæ* into the third generation in liquid media, the first inoculation being made directly from the lymph of the vesicles on a calf at Dr. Martin's stables in Roxbury; but limited experiments failed to produce characteristic vesicles on babies vaccinated from these cultures.

The comma baccillus of cholera (Koch, 1883) has of late attracted much attention. They are found chiefly in the excreta of cholera patients, are slightly curved like a comma or half of the letter U, and occur singly or in pairs like the letter S; when their growth is retarded they form a spiral chain of several members. They are easily cultivated on nutrient gelatine, forming a growth easily distinguished from others, even from those which are morphologically similar, viz., the so-called cholera nostras, comma bacillus of Finkler and Prior, the mouth comma of Miller and the cheese comma of Deneke. After much experimentation Koch has succeeded in inoculating animals. The bacilli require an alkaline medium for their growth; so he injects with a catheter, carbonate of soda into the stomach of guinea pigs, to neutralize the acid of the gastric juice. Then he injects a considerable quantity of a solution containing the comma bacilli. Even this is not sufficient; for they pass through the intestines so quickly that they do not proliferate, and therefore he injects into the peritoneal cavity tincture of opium sufficient to paralyze the intestines and stupefy the animal for some time. About half of the animals so treated die in from twelve to twenty-four hours, and a nearly pure culture of comma bacilli is found in the intestines.

In scarlet fever Coze and Feltz have found micrococci in the blood, and inoculation of rabbits sometimes produced death; but it is not certain that it was due to scarlatina. Polae Pineas found very minute micrococci on the scales of desquamating epithelium; and in the throat discharge.

In acute infectious osteomyelitis a peculiar micrococcus is found, which is easily cultivated, and, when rabbits are inoculated, and their bones broken, abscesses form containing micrococci.

In measles Coze and Feltz found bacteria in the blood which were minute and mobile. The rabbits were not killed. Braidwood and Vacher caused children with measles to breathe through glass tubes coated with glycerine, and found sparkling bodies, something like those in vaccinia, but larger. These were most abundant during the second and third days. They also found them in the lungs and livers of two children who had died of the disease.

The individuals of the streptococci of erysipelas are smaller than the micrococci of vaccinia. Lukoinsky found them in zoöglea masses in the lymphatics, on the border of the erysipelatous zone. Fehleisen also found and cultivated them. He inoculated the ears of nine rabbits, and produced the characteristic rash in from thirty six to forty-eight hours; the animals did not die. He also produced typical erysipelas, in from fifteen to sixty hours, in men who were inoculated to produce beneficial results in tumors. I have also cultivated them in liquid media.

Septicæmia and pyæmia have been carefully investigated by Koch, and these diseases have been found due to bacteria, which he has cultivated and inoculated.

In diphtheria, micrococci are found in the membrane and in the surrounding lymphatics, blood, kidneys and muscles. They are about the size of *M. Vaccinæ*, slightly oval, single or in pairs and in colonies. Eberth showed the particulate character by filtration. Klebs claims to have produced diphtheria from inoculation of pure cultures, and to have found micrococci in the tissues and blood. Nasiloff inoculated the cornea with enormous multiplication of micro-organisms in the lymphatics of the palate, bones and cartilages, and says that they are the primary steps.

With the diphtheria micrococcus I have had a personal experience. Some membrane was secured from the throat of a child during the operation of tracheotomy to relieve stenosis caused by diphtheria, and with it one of my hermetically sealed culture bulbs (made after Sternberg) filled with a sterilized nutrient fluid, was inoculated. On the fourth day the liquid, previously clear, became turbid, and on examination with the microscope at about 1000 diameters it was found swarming with micrococci in active motion about the size of the micrococcus of pus. In form they were slightly elongated, and although found singly, were generally found in groups of three or four to eight or twelve. A second bulb was inoculated with a fraction of a drop from the first; it became turbid on the third day, and was found to contain a micro-organism identical with the former. In this way about fifty bulbs were used, and the cultivation was carried through ten generations, each bulb becoming turbid on the third day, and the micrococci breeding true.

With the contents of one of the bulbs containing the sixth cultivated generation of the micrococci, six guinea pigs were inoculated in the cornea of the eye. One of them died about thirty hours later with symptoms of blood poisoning, but the rest survived. The eyes became very sore, the lids being much swollen and œdematous, and a membrane developed over the cornea. There was profuse discharge, which contained abundant micrococci. Three pigs were killed on the third day, and the eyes dissected for examination. The others were allowed to get well, but the eyes were completely destroyed. In the aqueous humor and in the corner of the eyes examined were found minute, highly refractive particles of uniform size, presumably micrococci. On the third day after killing the guinea pigs, I myself had a sore throat, and in twelve hours a large diphtheritic membrane had developed on the left tonsil, accompanied with high fever and constitutional symptoms. The disease ran a typical course, and convalescence was slow. Here, then, we have the chain of events complete. A fatal case of diphtheria, from which the germs were cultivated in pure cultures through ten generations, and the inoculation of the animals from which the experimenter himself contracted the disease, with development of membrane containing micrococci, which reproduced themselves in cultures.

The question as to the origin of life has been much disputed, and the exponents of spontaneous generation and of the germ theory still continue the contest.

Extremists in the doctrine of evolution can not sustain the hypothesis that the whole system of animal life is but a growth of one or more original species, changing into or evolving others through methods of development. The long ages of the past show the universality of the law of life, that like produces like.

Neither the agnostic nor the materialist can account for the origin of matter, much less can they account for the origin of mind. Naturalists tell us, that while the animal and vegetable kingdoms are reducible to primoidal cells; that while there is a time when the embryos of species can not be distinguished from each other by any essential features, yet the variety of structural forms, and the diversity of physiological functions which cells develop, are always according to the special type and construction of their parent cells, evidencing a unity of plan in their construction and development.—*Journal.*

San Francisco Microscopical Society.

Reported for the MEDICAL NEWS by C. P. Bates, Recording Secretary.

THE regular meeting of the San Francisco Microscopical Society was held April 24, 1889, at its rooms, 120 Sutter Street, President Payzant presiding. A fine series of photographs was exhibited, containing some graphic enlargements on the new Eastman bromide paper. This process of enlarging on bromide paper, though quite recent, is very popular and produces excellent results, the effect, when exposure and negatives are properly manipulated, being almost equal to steel engraving.

Examples were shown of Pleurosigma Angulatum the negatives of which were taken at a magnification of sixteen hundred diameters.

The bromide process commends itself to those interested in photo-micography by its simplicity compared with the tedious work of printing from silver paper. The donations to the library included a very satisfactory résumé of the progress of microscopical investigation both at home and abroad.

Mr. Lickenby occupied most of the evening in concluding his practical demonstration of preparing and mounting insects in balsam. A general summary of his methods was given in the report of April 10th, but some special points were brought out last evening which are of interest to those engaged in this branch of the study. It is quite difficult, in preparing many of the smaller forms of insects, to remove the debris from the surface of the specimen without injuring the delicate portions. This the gentleman accomplishes by the aid of albumen, flowing the white of an egg over the object and immersing the slide in hot water till the albumen is coagulated, when it will generally crack open and may be removed in two portions, carrying with it all the foreign matter and leaving the surface of the specimen perfectly clean. Another thing strongly advocated is thorough washing of the objects in running water and a final rinsing in either filtered or distilled water before placing in alcohol.

In mounting, the insect is placed under the cover glass arranged in proper shape, the clearing solution applied, and when sufficiently transparent the oil of cloves is drained away and Canada balsam introduced at one edge of the cover glass, the slide being held over the flame of a lamp to gently warm the balsam and allow it to flow in and displace the remaining oil of cloves. No annoyance need be felt at the appearance of bubbles of air, as they will all gradually disappear. The mount, when filled with balsam, is placed in a warm oven or incubator and kept at a temperature of from 120° to 130° Fahrenheit for twenty-four hours, when the balsam will be thoroughly hardened and all the air bubbles driven out.

Mr. Lickenby does not advocate the use of volatile solvents with balsam, he being convinced that a certain amount of gas is always retained in the mount in a latent state, requiring only a slight amount of heat to produce bubbles and disfigure the specimen. The outer skeleton of insects is composed of a substance called *chitine*, which is quite unique in its chemical composition. It appears to be, within certain limits, very resistant to acids and alkalis, and it is owing to this fact that caustic potash can be used in such varying proportions in treating them for microscopical study. It is said, however, that *chitine* succumbs to the action of chlorine compounds, which would render that substance unfit for use in bleaching many of the delicate forms.

The members of the Society are strongly in favor of these practical demonstrations, and quite a discussion of the matter was indulged in, the result of which may be the inauguration of a movement that will tend greatly to arouse the zeal and add to the effectiveness of future microscopical work.

Before adjourning the Society tendered Mr. Lickenby a hearty vote of thanks for his skillful and instructive demonstrations.

Gleanings.

MAMMARY TUMORS—THE IMPORTANCE OF EARLY DIAGNOSIS AND EARLY REMOVAL.—Dr. W. B. Rogers, of Memphis, (*Memphis Jour. Med. Sci.*, May, 1889), shows the importance of early diagnosis of tumor of the breast. The world needs to be educated to the fact, that malignant growths, early and thoroughly extirpated, in many instances never return; that cancer of the breast is primarily a local and not a constitutional disease; that early removal sometimes saves a life, prolongs many lives and shortens but few. All tumors of the mammæ are either cystic or solid. Three varieties of cystic growths are found:

1. *Retention cysts*—due to occlusion of a duct with constant accumulation, causing dilatation of milk vesicles and ducts, the walls of which form the cyst wall; such a cyst contains milk, with occasional accidental hemorrhage.
2. *Exudation cysts*—the dermoid cyst.
3. *Adventitious cysts*, or new formed cysts—whose walls are formed by the hypertrophy of dilated connective tissue spaces. Such cysts contain ecchinococci, pus as in the cold abscess, or a serous fluid coming from the blood-vessels and lymph spaces of the part. Of the solid variety we find four:

1. *Adenoma;* 2. Fibroma; 3. Epithelioma—carcinoma in one of its types; 4. Gumma. The sense of fluctuation on palpation is the test most generally used to tell a cystic from a solid growth. But aspiration is the best method of diagnosis.

Adventitious cysts—new formed cysts whose walls consist of hypertrophied connective tissue space walls—are of three varieties:

a. *Ecchinococci*—Aspirator reveals fluid containing ecchinococci.

b. *Cold abscesses*—Aspirator reveals pus.

c. *Simple and compound cysts*—Aspirator reveals serous fluid; clear or opaque, yellow, red or brown.

Retention cysts—galactoceles—occur only during lacteal period; aspirator detects milk. Considered as a whole, infant cystic tumors of the mamma are non-malignant.

Dermoid cysts are to be excised.

Ecchinococci cysts are to be incised, curetted and drained till healed.

Cold abscesses are to be incised, curetted and drained till healed.

The galactocele is incised, or punctured and drained, while the functional activity of the gland is depressed.

Adipoma is a diffuse hypertrophy of the normal fatty elements of the organs.

Adenoma is a circumscribed hypertrophy of the secreting portion of the organ.

Fibroma is a circumscribed hypertrophy of fibrous tissue.

Carcinoma is a circumscribed induration fixed in the substance of the gland.

Gumma is a syphilitic deposit.

Dr. Rogers confesses a disbelief in any positive reliable diagnostic point between a fibroma, adenoma and carcinoma, in their infancy.

Every solid tumor of the breast ought to be extirpated in company with the entire gland, most of the skin covering the gland, the pectoral facia; the connective tissue, fat and lymph structures of the axilla. Since 90 per cent. of tumors sooner or later develop malignancy, the course to pursue is complete extirpation of the gland, with the one exception, galactocele.—*Va. Med. Monthly.*

CAUSES AND PREVENTION OF PUERPERAL SEPTICÆMIA is the title of a paper by Dr. J. M. Pace (*Tex. Cour. Rec. Med.*, April, 1889). Adopting Lusk's definition of the disease, he rapidly sketches the literature on the subject from the days of Hippocrates down to the present time. The idea as to the importance of rendering the atmosphere aseptic is not now adhered to. He believes Paget struck the key-note in asserting that *aseptic surgery is clean surgery.* The belief that puerperal septicæmia was caused by the absorption of septic matter through the lesions of the genital tract was first advanced by Semmelweis in 1847, and is now no longer disputed. Credé's summary of the prevention of puerperal fever under two heads is a good one: 1. "Prevent as far as possible the lesions of the genital tract." 2. "Prevent the infection of the lesions that are inevitable." Under the first head all improper positions should be corrected and few vaginal examinations should be made. He holds that the sack containing the liquor amnii should remain intact until spontaneously ruptured, unless there are good reasons for an earlier interference. Under the second heading comes the strict observance of utter cleanliness and the non-interference with the uterine cavity after labor unless the temperature suddenly rises and remains so for twenty-four hours, when uterine douches may be used and an iodoform suppository introduced.—*Va. Med. Monthly.*

REMOVAL OF A FOREIGN BODY FROM THE BLADDER.—Dr. W. T. Briggs, of Nashville, Tenn., reports (*Nashville Journal of Medicine and Surgery*, April, 1889,) the case of a man who introduced a cylinder of steel about an inch and a half in length and a quarter of an inch in diameter into his urethra for the purpose of "cooling an irritable spot" and went to sleep. When he awoke it had escaped into the bladder. The usual symptoms of the presence of a foreign body in the bladder soon manifested themselves. A small lithotrite was introduced, the body was seized and removed. The success of this manœuvre was due to relaxing the grasp of the instrument upon the body after firm traction had drawn it to the vesical opening of the urethra, thus permitting the cylinder to be pressed upon by the surrounding parts into a line with the instrument.

PROLAPSUS UTERI.—In the *Nashville Journal of Medicine and Surgery*, April number, Dr. W. L. Nichol, of Nashville, Tenn., after describing the natural supports of the uterus, details the operation by himself on a case of thirteen years' standing. It was a case of extreme prolapsus; the uterus was enlarged, the perineum destroyed, and after replacing the womb, the vagina was found to be treble its proper size. The patient being placed in the extreme lithotomy position, the mucous membrane of the posterior wall of the vagina was hooked up and stitched. This strip of mucous membrane was then dissected off with a pair of scissors and terminated in two arms on either side of the womb. The edges of the denuded structure were then stitched together with interrupted sutures of catgut, thus greatly diminishing the size of the vagina. The womb was then restored to its normal position and the perineum was restored by sutures extending throughout its entire depth. Lastly he supplemented his work by adding Alexander's operation. The result was good both to primary union and thorough sustenance of the organ.

MALIGNANT TUMOR OF THE KIDNEY AND SUPRA-RENAL CAPSULE.—In *Progress*, April, 1889, Dr. J. H. Grone writes the history of a woman who died from tumor of the kidney and supra-renal capsule. On February 15, 1888, she had a tumor removed from the right axilla and made a good recovery. In October following she began to complain of pain in the loins and left side. On December 27 she was admitted into St. Agnes' Hospital, being greatly emaciated and markedly cachectic. Physical examination revealed a tumor occupying the left half of the abdomen. It was quite fixed, and upon palpation was found to be firm, until three weeks before death, when it became soft. Red blood corpuscles and hæmoglobin were diminished in the patient's blood. Urine normal. Died March 13. At the post-mortem, the tumor was found to extend from two inches below the diaphragm to three inches above the brim of the true pelvis. The spleen was attached to the apex of the tumor. The kidney was in the lower segment of the tumor and enveloped in its covering. It seems to have sprung from the renal capsule—that organ being the seat of a large cyst filled with grumous fluid and fatty disintegrated debris.

SUB-ACUTE CEREBRO-SPINAL INFLAMMATION, THE RESULT OF CONCUSSION.—On September 20, 1888, L. K., aet. 55, by occupation a collector, was run down by a rapidly driven horse, thrown violently upon the cedar block pavement, and received an incised wound over the left eye, a contusion on the cranium to the right of the occipital protuberance, and bruises on the back and hips. In four days the patient had resumed his occupation, and worked until the morning of October 19th. On rising from the bed he discovered that he could not maintain his equilibrium, and he dragged his left leg when walking, although he suffered no pain. There were no points of tenderness over the spine, although pressure over the contusion on the cranium produced pain. Pulse 55, no ataxic symptoms, reflexes normal. Arcus ænilis well developed before injuries received. During the few days following there were progressive symptoms of disorder of powers of co-ordination, and sub-acute cerebral inflammation. Restlessness, mild delirium, talkativeness, morbid vigilance, nystagmus, incontinence of urine, pains and contractures of the lower extremities were symptoms that ensued.

From November 3d to February 1st patient would fall backward when in the sitting position unless supported. He complained of pain at the base of the brain. Aphthous sores appeared in the mouth, but his appetite remained good, although symptoms of exhaustion appeared. He answered questions apparently intelligently, but talked incessantly and had delusions. The incontinence of the urine gradually subsided.

About February 1st he appeared to recover his intelligence, but the events of the preceding three months had no place in his recollection. He could recall the accident, but the following period of time was a blank in his consciousness.

The muscles of the lower extremities were wasted and flabby. In a few days, however, he was able to sit up, and gradually was able to walk. At this date he has entirely recovered, with the exception of pain and stiffness of the arms, this being worse when he performs such movements as are necessary to put on his overcoat.

One feature of his illness was inability to sleep prior to 3 o'clock A. M. For a few nights forty-five grains of sulfonal procured him sleep, but this effect was soon lost at those doses, and it was not considered advisable to try larger doses, as our knowledge of the action of this hypnotic was then limited.

Two consulting physicians had given an unfavorable prognosis.

The points of interest in this case are: 1. The period of time elapsing between the 'receipt of the injuries and the onset of the inflammatory disease. 2. The difficulty of differentiation of diagnosis. It was a question whether it was a case of simple concussion, meningeal inflammation with effusion, depression of a portion of the cranium, or subacute inflammation of the meninges and substance of the brain and spinal cord. 3. The final recovery of the patient to almost complete health. It is the rule that these cases leave serious results, so that the patient is unable to resume his occupation.

New Antidote for Morphine.—Prof. Bokai, of Klausenburg, believes that the best antidote for Morphine is picrotoxin. The two substances act in an opposite manner on the respiratory center, morphine paralyzing its action, while small doses of picrotoxin increase it. As in poisoning by morphine, death occurs from paralysis of the respiratory centre, and as picrotoxin hinders this paralysis, it follows that picrotoxin is likely to be of real use in morphine poisoning. In morphine poisoning diminution of the blood pressure plays an important part, but picrotoxin enjoys the property of stimulating the vasoconstrictor center of the medulla and thus counteracts the effect of morphine. Once again, the action of these two substances on the cerebral hemispheres is also of an opposite character. As atropine, the only known antidote of morphine, can not be administered in large doses, it is certainly desirable that no other means of combating morphine poison should be sought for. Professor Bokai thinks that picrotoxin may be useful as a substitute for preparations of nux vomica, and he also believes that it will be found of value in preventing chloroform asphyxia. —*London Lancet.*

A SALVE FOR BURNS.—A salve for burns, said to be most excellent where the blisters are not broken, is made, according to the *Droguisten Zeitung*, by adding one part of creosote, two parts of bone-black, and three parts of rectified spirit to twenty-four parts of spermaceti salve.—*National Druggist.*

CALOMEL—FACIAL NEURALGIA—PNEUMONIA.—Dr. Goss' onslaught upon calomel has caused many subscribers of the *Brief* to write up its merits and demerits. Having been salivated, and possessing a constitutional susceptibility to mercury, he unfortunately exhibited a feeling of prejudice against its use in any case whatever, asserting that we had many substitutes in the materia medica. A man of his profound knowledge of therapeutics ought to have known and does know that no remedy, in a scientific point of view, is a substitute for another. The properties of one may approximate those of another, but in exact therapeutical effects each is always different from the other. In a practice of more than thirty years, I have used the various mercurials, judiciously and cautiously—and not with a heavy hand—and shall continue to use them whenever indicated, till convinced of their absolutely deleterious effects upon the human system by stronger reasons than those adduced by Dr. Goss and his disciples. Every medicine in the materia medica acts as a specific poison upon some patients, and it would be sheer fanaticism to exclude a valuable remedy from our armamentarium simply because it was incompatible with the idiosyncrasy of one patient in a thousand. A man ninety years old and upward, in this community, has taken calomel all his life in large doses, whenever sick, and is still hale and hearty, for one of his age. I know others who use blue mass imprudently, and yet have good teeth, advanced in years, and are hale and hearty. I am not an advocate of the indiscriminate and heavy use of mercurials, but I will assert they have no substitute in the treatment of a certain class of diseases. Dr. R. C. McCann reports a troublesome case of facial neuralgia, in September *Brief*. If the doctor will give his patient one drachm of celerina immediately after each meal, and about three to five grains of pyro-phosphate of iron an hour before each meal, using tinct. gelsemium and bromide potass. as an anodyne and sedative, at the same time regulating the secretions, I think there will be some amendment in the symptoms. This variety of neuralgia proceeds from *nervous exhaustion*, and celerina, with a nutritious but light diet, will recuperate the shattered nervous centres. I had a severe case of the kind in question, and relieved her by the above course of treatment. It was of several years' standing. The subject of pneumonia is looming up in the *Brief* at an auspicious time again, as the dreaded season for its development is rapidly approaching. This disease in many sections of this country is alarmingly fatal. In many localities fifty per cent. of the cases of pneumonia prove fatal. If the pathology of this much dreaded disease was perfectly understood by the profession at large, its mortality would be greatly reduced. It is not *fashionable* now to bleed or blister in any case of pneumonia, but use the wet pack, push aconite and veratrum to the fullest toleration of the system; give alcohol and quinine in large doses, when the patient is delirious, skin hot, pulse full and bounding, and a rich and nutritious diet. Such is the modern course of treatment in pneumonia. Like Dr. Geo. W. Carpenter, I would say, let symptoms govern you in the selection of remedies of any case, and not the name of the supposed disease. I may have more to write on the subject of pneumonia hereafter, as I think I can compare bills of mortality favorably with any other physician.—*Wm. R. Putney, M. D., in Medical Brief.*

PRURITUS PUDENDI—May be successfully treated, according to Routh (*British Med. Jour.*), by bathing with a solution made by putting a teaspoonful of borax into a pint of hot water, shaking thoroughly and adding five drops of oil of peppermint. If there are any excoriations, or if eczema is present, this will cause too much smarting, and it is better to substitute for it olive oil, with five grains of iodoform to the ounce.

COLD CREAM.—The formula which we find in the United States Pharmacopœia for making this preparation is as follows: Take of expressed oil of almonds, 50 parts; spermaceti, 10 parts; white wax, 10 parts; rose water, 30 parts. Melt the oil, spermaceti and wax, and then gradually add the rose water, stirring the mass constantly. I have found that if the quantity of wax be doubled, the resulting mass is one of firmer consistency, and makes a much better ointment base, as it does not melt so easily. It is stiffer, and a thicker layer can be laid on. To make a delightful and antiseptic "camphor ice," add 10 parts of camphor phenique to the melted wax and fats, instead of the rose water. *St. Louis Med. and Surg. Journal.*

SAFE DELIVERY OF TRIPLETS AFTER DEATH OF MOTHER.—On November 13th the patient was well and in high spirits till 6 o'clock in the afternoon, when labor pains set in. At 9:30 fits of dyspnœa came on with each pain. A head was dilating the os, which had reached the diameter of a two-franc piece. The membranes were ruptured in order to diminish the uterine tension, but, before the forceps could be used to hasten labor, a fatal attack of dyspnœa set in. The midwife, Mdlle. Carrier, unable to restore the patient by artificial respiration, and still without assistance, endeavored, and successfully, to save the children. First she pushed back the head, finding no difficulty in introducing her hand into the uterine cavity. She then seized a foot and drew out a child; it breathed. She tore the cord, and did not ligature it. Once more she passed her hand into the cavity of the uterus, which was very capacious, and met with a great, flaccid, membranous pouch, which she could not break. She seized a member, and pulled it into the vagina; it tore through the membranes, and was found to be an arm. Mdlle. Carrier traced the corresponding foot, and then delivered the child with the greatest ease; it cried at birth. An assistant was now present, and the cord was tied. Mdlle. Carrier introduced her hand a third time and tore the membranes as on the second occasion, withdrawing the third foetus. It did not breathe, but its heart beat. All the three soon breathed well, and were alive when the case was published. The delivery of the three was effected within five minutes. The last was born twelve minutes after the mother's death. The placentæ remained adherent. The first two children were females. The lightest weighed about four pounds and a quarter, the heaviest under six pounds and a half. No organic disease of the mother's heart and lungs could be detected, either before death or at the necropsy; the liver was enormously hypertrophied, and the walls of the right ventricle were rather thin.—*British Medical Journal.*

SYPHILIS.—In discussing (Irish College of Surg.) the transmission and invasion of syphilis, Mr. Fitzgibbon expresses his conviction of the duality of venereal poisons, and holds the poison of syphilis to be distinct from that which produces either chancroids or gonorrhœa; adding the observation that syphilis often co-exists in the same individual with chancroids and gonorrhœa. This, in his opinion, explains the phenomena that different individuals may contract—one syphilis, another gonorrhœa, and a third chancroids, from the same source of infection, without upsetting the dual theory. Cases are next detailed of what be called syphilitic gonorrhœa and also of *bubon d'emblee*, and two cases where syphilis was acquired in an extraordinary manner. The first of these was that of a banker who contracted a Hunterian chancre on his lower lip by fingering bank-notes which had been recovered from a prostitute who had stolen them from one of his clerks and secreted them in her vagina. The other and even more painful case was that of a young lady only fourteen years of age who infected an abrasion on the thigh with syphilitic virus from the seat of a closet at a railway station. In conclusion, Mr. Fitzgibbon expresses his approval of legislation to prevent syphilis, and of the repealed contagious diseases acts, giving statistics confirmatory of their beneficent action. Arguing from the fact that the source of syphilis is prostitution, he urges that 'if it is cut off at the source the stream will cease to flow." In the interest of humanity, and of the fallen women themselves, some protective measures are, he contends, urgently demanded.

Tonsillitis—Sir Morell McKenzie recently gave in Edinburgh a clinical lecture on this affection, and in the course of his remarks, as reported in the *Edinburgh Medical Journal*, he said:—"A person who has once had acute tonsillitis never really gets well, though he may appear to do so. The treatment, therefore, is important. One of the most popular remedies is aconite—originally, I believe, a homœopathic drug, but now used extensively by allopaths (though I object to the term)—and strongly recommended by Dr. Ringer. It has certainly never in my hands proved to be of the extraordinary value which he asserts. On the other hand, I have found guaiacum, which used to be given in the form of the ammoniated tincture, very efficient. I recollect a Manchester surgeon, Dr. Crompton, who used to come a good deal to the Throat Hospital about the time it was founded, telling me I should find much more benefit by giving it in the form of a powder: and I did so, letting the patient take a pinch of the resin. This was rather disagreeable, and after a time I had it made into lozenges containing about three grains in each. In this form it makes an excellent remedy. Nine cases out of ten will get rapidly well if one of these lozenges is given every two hours at the outset. I sometimes also apply locally a little bismuth and opium, or an eighth of a grain of morphia with a quarter of a grain of starch, because the problem is not only to cure the patient, but to keep him comfortable till he is cured. Sometimes the guaiac causes a little diarrhœa, which is not altogether disadvantageous, but the morphia is usually sufficient to check it."

Book Notices

A Guide to Therapeutics and Materia Medica. By Robert Farquharson, M.P., M.D., Edin., F. R. C. P. Lond., LL. D. Aber. Late Lecturer on Materia Medica at St. Mary's Hospital Medical School, etc. Fourth American, from the Fourth English Edition. Enlarged so as to Include all Preparations Officinal in the U. S. Pharmacopeia. By Frank Woodbury, A.M., M.D., Fellow of the College of Physicians, Philadelphia, Professor of Materia Medica, etc. in the Medico-Chirurgical College of Philadelphia, etc. 8vo. Pp. 598. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price $2.50.

This work has met with great favor from the profession both in this country and Great Britain, as it has reached four editions in both of them.

As we have noticed previous editions of the work, it will not be necessary for us, at this time, to describe its merits at length. We will repeat, however, that more than any other work of this kind it reduces the treatment of disease to a science.

Although the fourth English edition was practically rewritten and considerably enlarged by the author, yet the American editor says that the advance in therapeutics has been so rapid and the additions to our materia medica so great that he has found it necessary to make very many additions so as to make the body of the work include all the remedies and preparations of the last revision of the United States Pharmacopeia. A number of non-officinal but important new drugs are considered, thus making the work as complete in the department of materia medica as it is in therapeutics—a miniature dispensatory in fact.

In its present form, which retains all the special features which characterized the work in its former editions, it is believed that it will prove to be even more acceptable than it has been heretofore, and that it will continue to serve a useful purpose as a handy reference book on therapeutics and materia medica to the busy practitioner as well as to the medical student.

We are of the opinion that no physician can have any more useful work in his library than Dr. Farquharson's work on Therapeutics and Materia Medica. It sets forth the principles of medicine, as they are recognized at the present time, in a lucid manner, without unnecessary verbiage, without discussion, and without quoting the views of writers in regard to unsettled questions. The established facts of therapeutics are taught in their proper place, while each remedy and its action as a curative agent, and its pathological effects are discussed in a practical manner. As a reference book it is easily consulted, and as a text-book for either students or physicians it is well adapted for qualifying those who study it to treat diseases.

A great convenience characterizes this work by many of the pages being divided into two columns—one describing the physiological actions of a remedy, and the other setting forth the therapeutical effects. For instance, in treating of aconite, it is stated in one column, in describing its physiological action upon the circulating apparatus, that it is essentially a cardiac sedative, slowing the action of the heart at first from inhibitory stimulation, but then causing an increase in the rapidity of the pulsations, with feebleness and irregularity, ending in death by arrest of all movement in diastole. At the same time the arterial pressure falls in a marked degree.

In the column at the side of this statement of the physiological action, the therapeutic effects are explained. It is stated that it is an excellent antiphlogistic, cutting short inflammatory processes in their early stages. That in *pneumonia*, *pleurisy*, *peritonitis*, *erysipelas*, *rheumatic fever*, and in the short, sharp feverish affections of children, it is of signal service, and seems to have a directly curative action, etc.

INEBRIETY: ITS CAUSES, ITS RESULTS, ITS REMEDY. By Franklin D. Clum, M.D., Author of Men and Women. Second Edition. 12mo. Pp. 248. Cloth. Philadelphia: J. B. Lippincott Company. Cincinnati: Alfred Warren. Price, $1.50.

Although this work has been written for the perusal of all intelligent persons of whatever calling or profession, it will be found especially interesting to medical men, for medical men more than any others, have what may be termed a practical interest in inebriety—or, "not to put too fine a point upon it," drunkenness.

The author, in the preface, describes the object of the volume as follows: "The object of this book is to give a clear, correct, and impartial description of drunken frolics; their consequences, and how to avoid them. The subject is treated from a scientific standpoint, and the drunkard is pictured in colors that are true to life. His habits, his diseases, his misfortunes, his miseries, are described exactly as we find them, and the easiest and best way to cure and reform him, is made known so simply and clearly that all can understand."

Nothing can be more true than the following statement which we find expressed in one of the lines of the preface: "If you indulge morbid appetites, gratify passions, neglect the intellect, foster wrong principles, cherish habits of idleness, vulgarity, dissipation, you will reap an abundant crop of corruption, disease, shame, degradation and remorse in the after-years of manhood." How many hundreds of young men whose prospects of life were the brightest, have blighted all by falling into habits of dissipation. Blessed in having affectionate parents who spared no expense in money, and were untiring in their labors to advance their welfare, and, consequently, becoming educated and accomplished and ready, seemingly, to enter upon most useful and honorable careers, which, if they should not bring fame to all of them, would at least to each one yield rich fruit in the way of the highest respect of good men and an extended influence, but, instead of controlling the natural appetites, subduing the passions, and rigidly practicing right principles, they permitted themselves to be led captive by vice, especially the vice of intemperance, and the harvest reaped was shame, degradation, remorse, and finally a miserable death.

But our purpose is to notice the work before us and not to moralize. Dr. Clum (in the ninth chapter of the work) expresses the opinion that inebriety is a disease, a disease which may either have been inherited or acquired. This view is now held, we believe, by the majority of alienists. In fact, we are of the opinion that it can not be regarded in any other light than as a disease. Under certain moral and religious surroundings, and good hygienic conditions, as stated by the author, the inherited tendency may never be developed—it may continue dormant, but still the tendency exists in the individual. There is reason to believe, we think, that it may skip a generation and manifest itself in the next. Or, as Dr. Maudsley and other authorities assert, drunkenness in one generation may entail upon another insanity, or epilepsy, or some other nervous affection. There can be no doubt but that the long-continued indulgence to excess in alcoholic beverages by an individual will eventually produce permanent changes in the molecular structure of the brain of that individual, which will be transmitted by him to his offspring, and from the offspring to the next offspring. But that the damage to persons may not become extended, Providence, in his wisdom, has so brought it about that families thus abnormally affected soon become extinct.

"Some men pride themselves on their ability to drink with great moderation, but moderation merges into excess so gradually, that we can not tell where one leaves off and the other commences, any more than we can tell the exact point where boyhood ends and manhood begins. The most severe censure should be given those persons who drink an occasional glass of wine, or other intoxicant, for mere sociality or conviviality."

The author states that inebriety may be the result of the action of physical injuries, direct or indirect, such as sunstroke, a blow on the head, any injury to the brain or spinal cord, or any traumatic injury that disturbs the harmony of the organism. He says that it may be symptomatic of structural disease of the brain, and any local or constitutional disease which lowers the natural nerve vigor may react in dipsomania. The disease, he thinks, most frequently manifests itself during the pubescent and climacteric periods, yet it may be developed at any period of life.

The work of Dr. Clum is the best monograph upon the subject of inebriety with which we have ever met. It is worthy the attention of physicians, and we hope that all of our readers will attentively read it. The author's observations have been very extended, and besides, he has given the subject his profoundest reflections. It may be thought by many that they know all that is to be known in regard to intemperance, its causes, effects, etc., but we feel sure that there are few who will not be both interested and instructed by this volume.

ELEMENTS OF HISTOLOGY. By E. Klein, M.D., F. R. S., Lecturer on General Anatomy and Physiology in the Medical School of St. Bartholomew's Hospital, London. Illustrated with 194 Engravings. New and Enlarged Edition. 16mo. Pp. 368. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, $1.75.

Students of medicine and young physicians will find this little work very convenient for their use. Of small size, it is easily portable, and can be carried by the student in attendance upon medical lectures so as to be consulted at any time.

Histology has become to be a study in the curriculum of all medical colleges, and it is important that appropriate text-books be prepared for the use of students. It seems to us that Dr. Klein, in the work before us, has furnished the colleges just such a one as is needed. So well adapted is it for its purpose that we can scarcely see how it can be improved upon. Those who are employed in original investigations, or are engaged in the special study of histology, will seek more extensive works, in which will be found more elaboration and fuller references to authorities, but those who will be content with facts so far as they have been demonstrated will find in this volume all that they need.

The author very naturally begins with cells, first demonstrating the ovum, and then describing the corpuscles of the blood. He states that by actual measurement it has been found that there are a little over five millions of blood corpuscles in $\frac{1}{15625}$ of a cubic inch of human blood. There appears to be in healthy human blood one white corpuscle for 600–1200 red ones. In man and mammals the relative number of blood corpuscles is greater than in birds, and in birds greater than in lower vertebrates.

It is scarcely necessary to state that all the tissues of all the organs of the body are demonstrated as regards their construction and character—showing also how they are adapted for the performance of their functions. The illustrations are very numerous—in fact, abound on nearly every page—and are very good.

We have no doubt but that the work will meet with general favor.

Editorial.

NOTICE.—Some of the subscribers are very much in arrears in their subscriptions. They will confer favor if they will remit at once without waiting for bills. As physicians expect those who owe them to pay them, they should pay what they owe—especially should they pay for their medical journals.

VOLAPÜK CONGRESS.—We learn from the papers that the World's Congress of Volapük is to be held in Paris in July. The Congress, it is stated, will continue in session several days to consider some minor changes that have been proposed in the language, and the means necessary to continue its spread and adoption for purposes of international trade, science and travel. Many of the European commercial schools, it is said, have introduced Volapük into their list of studies.

There are expected to be delegates from Norway, Cape of Good Hope, Russia, Turkey, Greece, Sweden, Portugal, Poland, Bosnia, Belgium, Bohemia, Austria, Germany, Hungary, Denmark, Finland, Mexico, England, Spain, France, Italy, United States, etc. The United States will have as delegates Col. Sprague, of New York City, and W. M. Ampt, of Cincinnati.

The motto of the Volapük language is: "*For one humanity, one tongue.*"

A great necessity is felt for a universal language. A hundred years ago when there were no telegraphs, no steamships, no railroads, and, consequently, but little intercourse between people of different nationalities, the want of one language for the civilized world was but little felt. But it is different now. The means of intercourse have so multiplied and are so easy of use that there is a constant commingling of the inhabitants of one country with those of another, and there is a great need felt for one tongue which all can understand and express themselves in.

But probably the want of a single means of communication is more strongly felt for the purposes of science and literature than for individual communication. In other words, the civilized and enlightened world has a greater need of a common written language than a common oral one, if there has to be a limit to one, for every one who can read has nearly as much occasion to consult the writers of other nations as those of his own.

Until almost a recent period the Latin language was the common language of the learned of all the nations of Europe. At the time of the Reformation we find Luther, Zwinglius, Calvin, Melancthon and their opponents writing and publishing their works in Latin. Hugo Grotius, a prolific writer, as is known, wrote and published his works in the Latin language, so that the learned of other countries, as well as those of his own, could read them, and consequently it was not necessary for them to be translated into half a dozen or more different languages in order to be read and understood by all interested. Sir Isaac Newton, the great philosopher, who first explained how an apple, loosened from its branch, fell to the ground, wrote his *Principia* in Latin. So also did Descartes, Thomas Hobbes, Bacon, Huygens and a host of others. It was from Huygens' name that the eyepieces of our microscopes are called. Cullen, the eminent Scottish physician, who first, from chaotic confusion, devised a scientific nomenclature of diseases, wrote all his medical works in Latin. But not only did he, but so also did all learned writers on medicine of his time and for some time afterward, make use of Cicero's language when they wrote to instruct others.

Since so great a need is felt for a universal language, so that when an eminent scientist writes and publishes a work, all of every country who are interested in the subjects of which it treats can have the benefit of it immediately, and not be compelled to wait for months for it to be translated, it has occurred to us that it would be far better to make the Latin language a universal language, as it used to be for many centuries, than to invent a miserable jargon, which was never spoken, and use it as a universal language. In thus employing the Latin language scientists would know that they would have a language in which they could express themselves freely and accurately, for, for centuries has it been the language of poets, of orators, of historians, and of scientists. The greatest minds the world has ever known have found it to be ample to express their thoughts. In fact, for exact and forcible expression it is superior to any modern language. Of course, to meet the present wants of science and of the arts, many new words would have to be added, as has been the case with the modern languages as discoveries have been developed.

A weighty reason, as it seems to us, for making the Latin language the universal language for which every one feels that there is a necessity, is the fact that the study of its forms, at the present time, is a part of the curriculum of study in all the institutions of learning of every nation of Europe and America, or, we may say, of the whole world. In scores of colleges and universities of this country the study of it, for several years, is necessary for graduation; and in hundreds of academies, seminaries and high-schools instruction in it is given. The *machinery*, if we may properly use the expression, exists to make the Latin language the second time a universal language. All that is needed is the proper employment of the *machinery;* and, if properly employed, it would become such without special effort to that end.

We believe that the reason that the Latin language is not now a universal language for the learned, is owing to the improper manner in which it is taught in educational institutions. If the method of teaching it was similar to that which is pursued in teaching a living language, so well would it be understood by the thousands who study it, that, on graduating, they would be able to read and write it with ease, and consequently, a medical man of learning, when he wrote a work for publication, knowing that it could be read by the profession throughout the civilized world, would write it in Latin, and not in the language of his country, so that only those who spoke it could read it. When Newton wrote his *Principia*, and Bacon his *Novum Organum*, and Cullen his work on medicine in Latin, each did so for the reason that he wished his work to be read by the learned of all nations.

Nowadays the study of Latin in schools and colleges is largely a waste of time. No real knowledge of the language is acquired. The method consists, after the student has studied the grammar some, and been exercised for a few months in translating some easy unclassical Latin, to read a few books in Cæsar, Virgil, Horace, Cicero, Livy, Quintilian, and he has finished. Place a Latin work in his hands which he has never read, and it will be found he can not read a sentence of it.

If we taught Latin, we would teach it as it is proposed to teach Volapük, if, perchance, an effort should be made to make it a universal language. We would take some of the text-books that were used between three hundred and four hundred years ago instead of those of modern date. We would put into the hands of our pupils Erasmus' Colloquies and the Colloquies of Corderius, and we would set them to work talking and writing to one another. If Latin were taught in this way, wherever it is taught, a physician would not be under the necessity of learning French and German in order to read the medical journals and works of those countries, for they would all be in Latin.

We suggest as an excellent motto for the learned: "For one humanity, one tongue, and that the Latin tongue."

AMERICAN AND EUROPEAN MICROSCOPES.—Dr. Johnston, of Baltimore, has quite a lengthy article in a recent issue of the *Maryland Medical Journal* on the comparative merits of the microscopic objectives of Germany and those of the best makers in this country. He cites from an address by H. J. Detmers, M.D., of Columbus, delivered before the American Society of Microscopists, in evidence that the celebrated objectives of Ernst Leitz, of Wetzlar, of Seibert & Seibert, also of Wetzlar, and of Carl Zeiss, of Jena, were in no respect superior to the best work of Tolles, now deceased, and of Spencer, of Geneva, N. Y. It is stated that Dr. Detmers, since the Pittsburg meeting of the American Society of Microscopists, went to Europe and visited the three principal optical establishments of Germany we have mentioned, taking with him some balsam-mounted *Amphipleura Pellucida* from Lake Nippersink and from Lake Pistakee. These diatoms he had easily resolved at home by lamp-light by a Spencer homogeneous immersion objective $\frac{1}{10}$ N. A. 1.30 and a $\frac{1}{16}$ Tolles N. A. 1.30; but on showing them to Mr. Leitz, to Mr. Seibert and Mr. Zeiss, they all failed to resolve them. He says that it is possible that these makers lacked the skill most advantageously to manipulate their own instruments. Nevertheless, however, the test objects were not resolved in Germany.

It seems strange that the work of these German makers should be so inferior to our American objectives, and yet, according to Dr. Johnston, when Zeiss constructed his apochromatic objective out of a new glass which he had constructed, the microscopical world was dazed by the splendor of their performances.

Dr. Johnston closes his article with the following declaration: "I am aware that the experiences and opinions of Dr. Detmers will be and have been severely criticised even by the men of our own country. It is, however, a consolation to know that we had a Tolles and have a Spencer who could and can rival at least the great makers of objectives of the Old World."

It seems to us that Dr. Johnston is mistaken in regard to Mr. Tolles making homogeneous immersion objectives before he died. We have the impression that they were invented by Professor Abbe, of Jena, subsequent to his decease. But we may be mistaken. We know that previous to his death he made objectives that had not been equaled.

CINCINNATI UNIVERSITY.—Governor Cox has resigned the Presidency of Cincinnati University, and very considerable interest is manifested as regards whom the Trustees will select to fill the position. The *Evening Post* advocates the appointment of a *business man*. We judge from the article that, in advising a *business man*, it does not mean a man of learning, with business qualifications, but such an individual as the public look upon as a business man—one who can drive a sharp trade, without reference to his learning.

We have read a letter, in one of the daily papers, of Mr.

Abner L. Frazer, who is a retired wholesale grocer, to Mr. J. D. Wells, a Trustee, strongly recommending the appointment of Dr. C. G. Comegys as President of the University. He says in his letter: "I can scarcely conceive of a more fitting man for the place than Dr. C. G. Comegys." And he thus recommends Dr. Comegys for the reason, he says, that he possesses great business ability.

No one esteems Mr. Frazer more than we do. He is a gentleman of acknowledged integrity, and has been actively engaged all his life-time in doing good—in advancing the welfare of his fellow-men. He served for a period with great eclat as President of the Ohio S. P. C. A. But while we unhesitatingly accord to Mr. Frazer great worth, and regard him as an intelligent business gentleman, we do not believe that he is qualified to judge of the wants of a great university, as Cincinnati University should be, and which it will be in course of time if it is only properly managed.

A university is understood to be an institution of learning. Do not people regard Cambridge and Oxford Universities of England as seats of learning—as also Harvard, Yale, Princeton, Lafayette and Dartmouth Colleges of this country? Were Woolsey, McCosh, Porter, and others who were at the head of famous American institutions and who gave them their distinguished reputations, mere skillful business men? Such a notion is preposterous. The Presidents of all these great colleges, from the time of their beginning to the present time, have been selected on account of their profound learning. Was Dr. McCosh induced to leave Scotland and come to this country to take the management of Princeton University because he had obtained great reputation for skill in operating a bank or managing a manufactory? We think not. He had obtained a world-wide fame as a man of learning and a profound philosopher, and it was thought that he, in consequence of his acknowledged eminence, would give distinction to the school and elevate it in the esteem of the learned and those seeking a classical and scientific education. Were the friends of Princeton mistaken in their views in regard to its being to the interest of the institution to go abroad in order to place at its head the most profoundly cultured and learned man of the age? The results proved they were not, for the brilliant fame of Dr. McCosh brought such multitudes of students as the college had never known before; and having established for it a permanent prosperity, the Doctor has retired from the active duties of his position, passing them over to a younger and more active man—the weight of years beginning to press heavily upon him.

Supposing that Princeton, instead of Dr. McCosh, had called to its Presidency a Vanderbilt or Stewart, of New York, if he had then been living, or some other equally famous man of business, what would have been the result? Would young men from all parts of this great country have sought its halls in quest of learning and the highest mental culture? Would it not be absurd to suppose such a result?

If Cincinnati University shall ever attain a high position as an institution of learning, it must select its President and its Faculty from men of distinguished learning. This seems to us too plain to require argument. There are in the medical profession of Cincinnati not a few gentlemen of very respectable attainments in medicine, and some who may be regarded as eminent as physicians; but we do not know of any who are qualified by great learning to be placed at the head of a great university. Mr. McMicken bequeathed a large estate to Cincinnati in order to found an institution of learning. Already a large portion of the fund has been lost by incompetency on the part of some of the managers, and by rascality on the part of others. There is still, however, enough left, by making additions to it, and by care, to found a great university, second to none in this country. But when we see the most ordinary business men, and with them ward politicians, made the trustees, and then find that these parties propose to institute a management that would reduce an ordinary academy to a second grade, we despair of Mr. McMicken's generosity adding to the fame of Cincinnati, in consequence of possessing not only the best common schools of this country, the most extended facilities for musical culture, but also the greatest university of the land, having for its Faculty men of the most profound learning. The Roman Catholics of this country have taken initiatory steps for founding a great university in Washington. Let us see if they will place at its head some Catholic Jay Gould, or Vanderbilt, or Wanamaker. The Catholic Church preserved in its institutions the works of science and literature that led to the revival of learning after the world had lain in the darkness of ignorance for some hundreds of years; and so when it founds colleges and universities it places at their head men of culture and learning, not business men—bankers, manufacturers, etc.

AN ALVINE MOTOR.—Various are the means resorted to for the relief of chronic constipation, but unfortunately most of them are, in a sense, futile, since the effect is but temporary. Dr. George W. Hoagland, of Columbus, Ohio, writes that he uses "ELIXIR PURGANS" (LILLY) with the very greatest satisfaction, and cordially recommends it to other practitioners. This preparation is used extensively in Carney Hospital and the Lying-in Hospital in this city; the Children's Hospital, New York; the New York Ophthalmic Hospital and others, while it is held in high esteem by a large number of physicians. Dr. G. A. Jordan, of Worcester, Mass., says it is certainly the best "*alvine motor*" he has ever used, and that it gives satisfaction in every instance. —*Massachusetts Medical Journal.*

MILLIONAIRE'S FEE TO A PHYSICIAN.—The fact is made public that H. M. Flagler has presented Dr. George Shelton, of New York, with securities of the par value of $50,000 (market value about $87,000), in consideration of his faithfulness and skill in attending the case of Mr. Flagler's daughter, Mrs. Benedict, who died on her husband's yacht off Charleston a few days ago, after a long illness. This is described as the largest fee but one ever paid to a physician.

A KANSAS PAPER publishes the following unique reminder to delinquent subscribers: "There i$ a little matter that $ome of our $ub$criber$ have $eemingly forgotten entirely. $ome of them have made u$ many promi$e$, but have never kept them. To u$ it i$ a very important matter—it'$ nece$$ary in our busine$$. We are very mode$t and don't like to $peak about it."

THE GREAT INVENTIONS.—Those of us who are fifty years of age have probably lived in the most important and intellectually progressive period of human history. Within this half century the following inventions and discoveries have been made: Ocean steamships, street railways, telegraph lines, ocean cables, telephones, phonographs, photography, and a score of new methods of picture-making, aniline colors, kerosene oil, electric light, steam fire-engines, chemical fire extinguishers, anæsthetics and painless surgery, gun-cotton, nitro-glycerine, dynamite, giant powder, aluminium, magnesium and other new metals; electro-plating, spectrum analysis and spectroscopes; audiphones, pneumatic tubes, electric motors, electric bells, type-writers, cheap postal system, steam heating, steam and hydraulic elevators, vestibule cars, cantilever bridges. All positive knowledge of the physical constitution of the planetary and stellar worlds has been attained within this period. And we will also mention that the powers of the microscope have been so increased by new discoveries as to make it almost a new instrument.

FACTS IN REGARD TO HERNIA.—Mr. Keetly, of London, we learn from a paper by Dr. Thos. W. Kay, states that in the year 1878 the population of England and Wales was about 25,000,000 of which 1,150 died from hernia. The mortality in 1879 was only a little less, being 1,119. The same death rate for the United States would give about 2,500 deaths yearly. Mr. Keetly arrives at the conclusion "that of persons with hernia, and not subject to operative interference until there is an imperative need for it, an average of 1 in 20 will, sooner or later, die of hernia."

Dr. Kay quotes some facts from Agnew in regard to hernia among the recruits during the late war. It is stated that 50 out of every 1,000 were rejected on account of hernia. Bryant says that the rejections are: Germany, 82; Italy, 76; France, 65; England, 39; and Ireland 36, in every 1,000 recruits. Malggainge found that $\frac{1}{13}$ of all the male, and $\frac{1}{52}$ of all the female, population of France were ruptured, or an average of $\frac{1}{20}$ for the whole population. It is asserted that the number of the ruptured in the United States, in proportion to that of France, is greater than what appears from the statistics of their respective recruits. This is probably true, but working with the same proportion we find that there are more than 2,000,000 in our land. The two truss factories of Philadelphia, alone, sell annually about 240,000! But we will inquire of Dr. Kay if some of these trusses are not exported?

MICROSCOPES AND INSTRUMENTS.—There is at the office of the MEDICAL NEWS an excellent microscope for sale, entirely new. It is adapted for all the work of a physician. Has two objectives—one inch and a quarter-inch. Made by Bausch & Lomb. Price, $25.00.

There can also be had, by corresponding with this office, several pocket cases of instruments, entirely new, at a low price.

THE
CINCINNATI MEDICAL NEWS.

VOL. XXII. No. 258. Old Series. JUNE, 1889. VOL. XVIII. No. 6. New Series.

Original Contributions.

Diastasic Food in the Treatment of Chronic Diseases and Deformities of the Bones of Children.

BY HAL. C. WYMAN, M.S., M.D., PROFESSOR OF PRINCIPLES OF SURGERY AND OPERATIVE SURGERY IN THE MICHIGAN COLLEGE OF MEDICINE AND SURGERY, DETROIT.

RICKETS, caries and curvatures are among the most frequent diseases of childhood. Every community numbers its cases of suffering, crippled and deformed children. Not a doctor of any standing but has under his care some of these cases. Too often he treats them reluctantly, because he has little faith in any treatment. One child will have its ribs flattened, its breast bone protruding (the pigeon breast), a hump on its back, a hip raised and shoulder drooping—a veritable Richard III. Another is pale and sickly, drags a limb between crutches, smiles piteously and feebly when the surgeon speaks a word of sympathy and hope. Pus and putrefaction are permeating its tissues, degrading nutrition and making rapid the journey to the grave. Another has its head misshapen, its legs are weak and muscles flabby; its skin is shrunken. It has suffered from diarrhœa, dysentery, cholera infantum. In infancy its head may have rested on its occiput too long, or the nurse may have carried it constantly on one arm. Its teeth are irregular, blacken and decay prematurely. There may be an inherited disease which gives an old look to what ought to be a child's face.

Surgery—chirurgery, as the Greeks called it—the handwork or manual part of medical art, is, single and alone, unable to cure these cases. She can incline the tree as it ought to grow. She can lop off a limb here and there, she can straighten and train, but she can not make the parts grow.

There is something in these cases more subtle than what the eye sees, which is at fault. The fountains of nutrition are perverted. Chemistry shows us that the food sources are impaired. We say the general health is bad, the lime-salts are insufficient, the fats are wanting, the blood is thin and poor.

A few cases will illustrate the points which I wish to bring out in this paper.

A CASE OF POTTS' DISEASE.

Ella K., aged eleven years, residence Detroit, began to exhibit the symptoms of Potts' disease five years ago. She was then treated with a plaster jacket; she did badly, failed steadily in health, until her physician was obliged to remove the cast and open an abscess which appeared below and near the angle of the left scapula. Angular curvature of the upper part of dorsal region developed suddenly. Metal braces were made by an expert instrument maker and applied to the spine for the purpose of straightening it. They failed. She improved for a few months in general health after the pus began to discharge freely, but finally the constant drain began to wear her out and she became restless, fretful and sleepless. Plaster was again resorted to, with a fenestrum through which to inject and clean the sinuses in the back. She ran down worse and worse. Her left thigh became flexed upon the abdomen, and an abscess appeared in the ham and required to be opened. She was suffering from septicemia; her urine was scanty, tongue furred, breath bad, and bowels moving with a frequency and fluidity which carried food through them almost as quickly as it was taken. Cod-liver oil had been freely given, but without helping the patient. She came to me with the above history. I found the abscess running freely, but there was an extent of pyogenic surface lining the abscess and sinuses greater than the existing reparative powers could heal. Antiseptic washes had been injected often.

I decided to try two plans of treatment, one addressed to the food and nutrition of the patient, the other to the pus cavities and sinuses. The latter I thought best to wash three times daily with hot, freshly boiled water which contained no chemical antiseptics. I had it applied by means of a hose attached to a fountain syringe. The nozzle of the hose was inserted as far as it would go, and the water allowed to flush the pus channels. The plan has steadily diminished the quantity of pus. The nutrition I compassed with the Diastasic food made by the Trommer Malt Company. Other foods were given at regular intervals. No severer test of the ability of good food and good dressing to restore bodily vigor could be had than was presented in this case, and the results were most gratifying. After six months the sinuses were healed, and the patient was able to use her limbs, which had been so long drawn out of position.

RICKETS.

F. C., aged five, residence Detroit, was brought to me by her parents to see if she could be taught to walk. She had a singularly old face and was very precocious. She had been under the care of doctors more or less constantly since an attack of cholera infantum during her second summer. Her teeth developed slowly. Her father had chancre two years before she was born. Her mother had never had any symptoms of local or constitutional infection. The child was strikingly deformed. Not a long bone in either extremity was straight. The bones of the forearms were bent backward so that her hand stood almost at right angles with her arm. Her legs were bowed and her thighs were crooked. The most unusual deformity was her skull, which presented a trilobed appearance, which looked as if it had been caused by tying the cranium with cords after the manner of doing up packages. She could not walk, and crept about dragging her legs on the floor. It was apparent that the arms had been bent creeping. Her muscles were markedly weak and flabby. Some one had tried to teach her to walk by fitting iron braces to her limbs, thinking to strengthen the knees and ankles. They availed nothing. I put her at once on Diastasic food with a diet of gruel made of beans and cornmeal boiled together. Milk I prohibited, because the history showed that it had never been digested readily and constipated the bowels with large scybulous curds. Instead, the Diastasic food was mixed directly with the gruels. She was given freely of fresh beef finely divided before cooking. The medicines given were iron carbonate and lime-water, three-grain doses of the former in a tablespoonful of the latter, three times a day. Then the nurse was directed to lay the patient on a table and rub her muscles with sweet oil three times a day. The legs and arms were pulled and rubbed in the direction in which they should grow, at the same time.

The child was also trained by the nurse to swing by her arms on a horizontal bar suspended in the door of her room. It was placed high enough so that her toes could barely touch the floor while the exercise was in progress. Great patience was required to induce the nurse and friends of the patient to persist in the diet, medicine and training; but after a time, (six months), improvement was observed. The limbs had grown strong and easily supported her body. She, a little later, learned to walk. The crooked bones, under the improved nutrition of the bones and muscles, are growing straight. The skull has grown, and its trilobed appearance is rapidly vanishing. It is now nearly two years since she came under treatment, and it is clear that the disease, rickets, is checked and its ravages pretty nearly corrected.

Pathologists have long recognized the scarcity of lime-salts, and particularly phosphate of lime, in the bones of rickety patients.

The soluble phosphates present in the food prescribed for case related, supplied the lime salts needed. They combine readily in the system to make the phosphate of lime, and thereby restore the element wanting in the bones of rickety patients.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

SPINAL AMYOTROPHY OF SCAPULO-HUMERAL FORM AS A CONSEQUENCE OF AN INFANTILE PARALYSIS CONTRACTED THIRTY-FIVE YEARS PREVIOUSLY.

LECTURE BY PROFESSOR CHARCOT.

The case we are about to examine relates to a man affected with a certain form of progressive amyotrophy and who at a previous period was seized with spinal infantile paralysis. The question that presents itself to us is this; 1st, With what kind of amyotrophy is he affected? 2d, Is there any relationship between the progressive amyotrophy of to-day and the spinal infantile paralysis of former days?

This is the history of the patient: He is forty-one years of age and exercises the profession of a jeweler on steel. At the age of two years he was suddenly seized with a paralysis which occupied the four limbs simultaneously. This is, as you are aware—this sudden seizure of several limbs—one of the characteristics of infantile paralysis; you also know that a restoration more or less complete subsequently occurs, but never absolutely perfect, because a paralytic diminution always persists, as it has done in our patient. First the left upper member is restored, then the right superior member, then the right lower limb, and lastly the left lower limb resumed their functions, but these latter recovered them only very incompletely. The muscles of the thigh are sufficiently well conserved, but those of the leg remain more or less atrophied, although he has always been able to walk. Thus the process of the infantile paralysis being terminated, the patient remained infirm, but relatively but little touched, since on the whole he was able to stand and to walk, and his upper limbs being unaffected, the malady did not prevent his exercising his profession of jeweler, which he continued to do up to within a year or two.

M. thus bore life very well, when the present malady supervened; but since I am speaking to you of infantile paralysis, I will recall to you that according to my opinion this malady is neither contingent nor microbic, and that it appears in families tainted with neuro-pathological blemishes. We can confirm this in the case here presented to you. The history of his mother answers very well, from the description that he has given us, to a history of paralysis agitans. This is the first point; moreover, one of his four brothers is an epileptic.

This patient was sent to us by M. Debore, and it is well to know that his case has already been twice published by two authors. The first time his history was reported by M. Dutie, my interne, in the *Gaz. Med.* of Paris; and again it was published by M. Raymond, of Metz, in the *Progres Medical.* This is therefore the third time that the case presents itself.

What is it that has happened to this patient whilst he was working despite his malady? Once one is attacked with infantile paralysis, the anatomical lesions persist, and after death the traces of it are found in the spinal column, the anterior horns of the gray matter showing indelible lesions. Consequently every individual who has been stricken with this affection carries spinal cicatrices. However, these are not the sole traces which this malady leaves, and you know the other anatomical marks: certain muscles remain atrophied and show fatty degeneration; moreover, the bones are marked by remarkable fragility. This last alteration is by authors said to be due to a functional inertia, because the limbs are not moved. I myself am not of this opinion, and it does not seem to fit more especially this case of M——, who, although able to walk well, has none the less this fragility of the bones. He has not alone fractured his left leg, but what is more interesting, he has broken his right humerus twice, despite the fact that this limb had not been seized and that the muscles were not atrophied. I believe therefore that this fragility is an indication of profound disturbance of the nutrition of the bones.

M. had therefore undergone this phase of the spinal malady and come out of it bearing its marks. I come now to the second act of the infantile paralysis, if there be anyhow any relation between the past and the present. Let us admit this for the present and see what happens.

It is now about four years. The present disease set in in the following manner. M. perceived one day that the right superior limb—the one which had recovered—became feeble. His profession as a jeweler in steel requires a certain energy, and the work is also very difficult. Then the left upper limb likewise became weak, and finally he perceived a marked decrease in the size of the parts affected. Finally the atrophy and the loss of power progress and compel him to discontinue his work. He noticed at the same time that his limbs were the seat of very pronounced fibrillary palpitations. These shocks, which you can observe at this moment, recall what Duchenne (of Boulogne) has described in progressive muscular atrophy, the sole amyotrophy formerly known. Otherwise M. suffered no disturbance of the sensibility, there was neither parasthesia, nor pains, hardly some slight numbness. Finally the accidents reached their last term and the patient enters first Loriboisiere, then the Hospital Audral in the service of M. Debove, who has sent him here to us.

We shall examine the patient before you, but before proceeding to this the following questions present themselves to us. We have here a subject who had been afflicted with infantile paralysis at the age of two years, in whom twenty years have elapsed without the appearance of any morbid act, and who suddenly, one fine day, is seized with atrophy of the right superior member, a part formerly implicated in the infantile paralysis and the seat of two fractures, then with a symmetrical atrophy of the lower limbs and of the thighs, which had up to this remained uninjured. Now, with what form of muscular atrophy are we confronted? Is there any connection between the recently developed amyotrophy and the former infantile paralysis? Or rather is it because of the patient's having been previously afflicted with infantile paralysis that he is now suffering from a fresh muscular atrophy? Will the atrophic period terminate definitely the period of infantile paralysis; or, on the contrary, the patients who have been so afflicted, will they not be exposed to certain aggressions, if not of the same form, at least under that of sufficiently similar muscular atrophies?

We have here a very interesting question, and one put by me already thirty years ago. It was in 1857, apropos of a patient who had had infantile paralysis, and who, ten years later, was afflicted with an atrophic paralysis of a limb that had remained uninjured up to date, and the full history of which case M. Raymond communicated to the Biological Society.

In resume. Is the formula which affirms the non-recurrence (*relapse*) of infantile paralysis absolute?

But let us return to our examination. We have here, as you see, a vigorous person, who, if we except the traces of his infirmity of infancy, has all the appearance of good health.

Let us consider first his lower limbs. The left leg, which presents the vestiges of an ancient fracture, is atrophied, livid and cold; the foot is almost totally flaccid. On the right, same atrophy, with algidity, and violent discoloration. The foot presents the deformity of talipes equinus. The muscles of the thighs are relatively but little atrophied, and contrast less with the inferior segments; the general cone-like form of these members is, however, still very appreciable. In all these muscles the fibrillary shock is very apparent.

Observing the upper limbs one is especially struck by the atrophy of the muscles of the arm and of the shoulder; I would call your attention, en passant, to a slight trembling of the hands which seems to be due to an alcoholic habit and has nothing to do with the principal affection which is now occupying our attention. The two deltoids, especially the right, are markedly atrophied. The pectorales are almost entirely gone. The muscles of the arm, biceps and triceps, to the right as well as to the left are much diminished in volume. I shall have the patient turn around and you will observe an enormous atrophy of the scapular muscles, the supra- and infra-spinatus, the rhomboideus and the trapezius.

On the other hand the muscles of the forearm and of the hands are well conserved.

We do not find here the characteristics of the type of Duchenne, in which the atrophy begins in the Thenar eminence, but rather those of the type called scapulo-humeral.

When the patient raises his arm a little the forearm immediately falls back in consequence of the paresis of the biceps.

The face does not appear at all involved. N. can whistle, can make grimaces, close the eyes firmly. These negative marks have, as you will soon see, a certain importance.

What is this affection, and under what category shall it be classified? To discover this it will not be useless to recall to you the diverse categories of amyotrophy. I shall leave aside the muscular atrophies which are dependent upon lesions of peripheral neuritis. There remain for us two groups. The first is the one I have called *Spinal Amyotrophies*, by reason of the characteristic they have in common, that of being dependent upon lesions of the anterior cornua of the gray matter.

The other is that of *Primitive Amyotrophies*, which have the general characteristic of not being dependent upon any alteration of the nervous centers. In these atrophies, which were formerly unknown, but which to-day are well studied, the muscle itself is affected.

Although anatomically these two groups are essentially different, it is nevertheless frequently very difficult to differentiate them in practice.

I now return to the *Spinal Amyotrophies*, they present several categories, and in recalling these to you I only repeat what I have said long before: We can distinguish, 1st. The acute forms, of which one, subacute, is the acute anterior tephro-myelites, infantile paralysis; the other, subacute, is the subacute anterior spinal paralysis; 2d. Chronic forms, of which some are protopathic, the others are deutero-pathic.

The *protopathic* chronic spinal amyotrophies are those which are dependent upon a lesion *primitive* and *systematic* of the cells of the anterior horns of the gray substance. This is then the only lesion in the spinal cord. This category differs from the acute forms only therein, that its evolution is a chronic one; there is therefore great analogy between it and infantile spinal paralysis. To-day it is only represented by what I have called the type Aran-Duchenne.

The *deuteropathic* spinal amyotrophies have as their points of origin *secondary* and *non-systematic* lesions of the cells of the anterior horns of the gray substance. They are produced under all circumstances whenever any affection of the spine invades the anterior horns. This group consequently differs very much from the preceding ones. One of its varieties is, for example, the muscular atrophy observed in tabes, and which is due to the extension of the sclerosis of the posterior columns to the gray matter. And what progressive locomotor ataxia does in this case, other spinal affections produce by an analagous mechanism. Thus will act a periependymic glioma by attacking the region of the anterior horns, disseminated sclerosis when one of its plagues is located in this same region.

But this secondary localization is especially habitual in that malady which I have separated from the group Aran-Duchenne and described under the name of lateral amyotrophic sclerosis. If, in this case, the primordial lesion is one of the lateral fasciculi, we observe this same alteration of the substance of the anterior horns as an ordinary consequence—I would say almost necessary consequence, of the fascicular sclerosis.

This double lesion gives rise to a double order of symptoms; to the phenomena of spasmodic paralysis is superadded muscular atrophy with fibrillary shocks. This type differs, therefore, from the malady of Aran-Duchenne: In this latter affection there are never observed the spasmodic phenomena which are always present in lateral amyotrophic sclerosis; furthermore, the patients of the type Aran-Duchenne may live ten to twenty years, whilst the evolution of lateral sclerosis is rapidly fatal by reason of the regular invasion of the medulla.

The group of spinal amyotrophies thus classified, I return to the other great group of my division, the primitive amyotrophies. Under the label of type of Aran-Duchenne there had been united a whole series of progressive muscular atrophies similar to atrophies of spinal origin, and which did not belong there. At the present day they have been more closely studied and certain distinctive characteristics have been discovered for them; these are the primitive myopathies.

They generally occur in young persons, and it is for this reason that Erb calls them juvenile forms. They usually present a special appearance by reason of their distribution, affecting the muscles of the scapulary girdle and of the arm, respecting those of the forearm and of the hand; they also invade the face; finally, they do not present any fibrillary shocks.

All these characteristics exist, as you will see, in this other patient who is affected with primitive amyotrophy, and consequently permits us to distinguish these two morbid species. This second patient is a goatherd, and the first symptom which struck him was his inability to whistle to his animals. His mouth, in fact, is pendent and he can not whistle; if the case is complete, the closure of the eyes will be imperfect. His forearms are affected, but his arms and hands are unaffected. Of the muscles of the shoulder only the supra and infra-spinatus are conserved. There is in him complete absence of fibrillary shocks; furthermore, several muscles present the reaction of degeneration, whilst in our first patient the electrical reactions, are only somewhat enfeebled.

M. nevertheless offers this special point, that the distribution of his atrophy conforms to the scapulo-humeral type; his case would be very simple if he presented atrophy of the thenar eminences.

It is from this point of view that he merits a comparison with his neighbor; but he differs from him essentially as much by the absence of atrophy of the facial muscles as by the electrical reactions, and above all by the absence of fibrillary shocks.

He belongs therefore to the class of spinal amyotrophies. Now to what variety? Does he belong in the class of lateral amyotrophic sclerosis or to the malady of Duchenne? If it were a matter of lateral amyotrophic sclerosis, as he is now suffering four years, he would present phenomena of the invasion of the medulla; but none of these are present. Furthermore, under the same hypothesis he should present modifications of the reflexes, which he does not. It is therefore not an amytrophic lateral sclerosis that we have to deal with.

It is consequently a case of muscular atrophy of the type of Aran-Duchenne. It is indeed a form of tephro-myelitis we have here. Now that we have determined the type, there remains for us the question: Is there any relation between the present affection and the former infantile paralysis?

I said to you at the outset that I had at one time seen a patient afflicted with an atrophy of the arm, a residue of an infantile paralysis, who fifteen years later was seized with a symmetrical atrophy.

Since Seeligmuller, Ballet and Dutil have reported analogous cases, I have explained to myself the evolution thus: Could not the spinal cicatrix resulting from the infantile paralysis and constituting for the spinal center a condition of vulnerability become the seat of a fresh inflammatory spurt which, having a less acute character, would cause us to assist at a second act modified by a like morbid process?

Since the epoch of this first observation I have seen other examples of atrophies in infantile paralysis. We must not, therefore, take things lightly and say: this patient has had an infantile paralysis; it is a misfortune, but he will have no more. This formula is not exact for all cases, since we see six, eight and ten years after the first affection, an amyotrophy of chronic character of the type of Aran-Duchenne making its appearance.

Our patient constitutes a veritable exception, but only from the point of view of his atrophy, for by all the other symptoms he enters the spinal category, as I have demonstrated to you.

The hypothetical conception which I have formulated to you as the concatenation of lesions, is it well founded? If you should consent to an inflammation secondary to an old cicatrix, you would without doubt ask, wherefore this secondary inflammation should systematize itself thus in the anterior horns. We can say that we have here to deal with subjects who have a hereditary tendency to spinal trouble, and spinal troubles of the anterior horns, consequently persons predisposed to this malady. In other words, it is not the cicatrix but the hereditary predisposition which comes into play. One will thus assist at two acts, the first acute and the second chronic of the same malady.

What shall we do for our patient? We will treat him by application of the hot iron (pointes de few) and by electricity, and we can put some hopes in these proceedings. It would certainly be different in a case of amyotrophic lateral sclerosis, for any individual whose muscular atrophy is dependent upon this disease is infallibly condemned to succumb to the invasion of the medulla in four or five years. This malady is implacable and is never arrested.

To return to our patient: as, fortunately for him he belongs to the category of Aran-Duchenne, he may hope for some attenuation of his affection. The disease in him is susceptible of arrest, the forearms and hands not being ulteriorly affected. All these considerations of differential diagnosis that I have set out before you, are therefore as you see, of the greatest value and importance.—*Le Ballet Medic.*

Heredity.

BY R. R. HOPKINS, M.D., RICHMOND, INDIANA.

THERE can be no doubt that the health and the peculiarities of the parents influence the physical characters of their children. It is a matter of daily observation, and one of the best possible illustrations of the fact is to be found in what are called family-likenesses, the transmission of such diseases as insanity, gout, scrofula, phthisis and rickets, the transmission of suicidal impulse and the uncontrollable and insatiable desire for stimulants, as well as all the nervous diseases handed down from parent to child. The general structure of the body, the height, the degree of development of the bones and muscles, the tendency to obesity or leanness, etc., seem to depend as frequently on one parent as on the other, in the case of man; but in many animals, as the dog, the horse, etc., the father most generally determines the general form and the size of the body. In man, the vital tenacity, or life force, color and complexion of the offspring, depend upon both of the parents.

Again, the transmission to the offspring of special marks, nævus, moles, hair-lip, an unusual number of fingers or toes, deformities transmitted from parents or more remote ancestors, special malformations of the heart and of other organs, as well as the longevity of life. Diatheses are impressed upon the constitution of the child with organic likeness of his parents; as the herpetic, syphylitic and strumous diatheses are equally manifested by cutaneous lesions and by those of mucous membranes. Each of these is in possession of the entire organism, and has penetrated it in all its parts, before the respective primary representative and local symptom makes its appearance, and is manifested in psora by its peculiar eruption, in syphilis by its peculiar eruption, by chancre and bubo, sycosis in condylomata. Either of these chronic miasms being deprived of its local symptom will, sooner or later, under the influence of natural causes, become developed, burst forth, and multiply the incredible multitude of chronic diseases which for ages have afflicted the human race.

Now then, as we have authority to prove these assertions, is it not reasonable to conclude that theft and prostitution are to a great extent handed from parent to child, as well as good health and well-balanced intellects.

To have children is a thing to be greatly desired ; but to have them of well-balanced organizations, healthy, beautiful, is a thing every parent should long, strive and work for.

Why is it that there is so much of the plain mediocre of mankind in the world ? Why is it that there are so few successful in life's endeavors ? Why is it that there is so much sin, misery, suffering and premature death, and so little of the genuine success and happiness ? Why is there so much of the wrong in life and so little of the right ? We must give those questions consideration. Their solution is easy. We are too apt to attribute the cause of the downfall of many of the young of this period to other than its real cause ; for when it comes to be understood that not more than one child in perhaps ten thousand is brought into the world with the consent and loving desire of the parents, and that the other nine thousand nine hundred and ninety-nine children are endowed with the accumulated sins of the parents, is it any wonder that there are so many ill-tempered people, so much sin, drunkenness, suffering, licentiousness, murder, suicide and premature death, and so little of purity, chastity, success, godliness, happiness and long life, in the world ? The millennium of purity, chastity and happiness can never reach this earth except through obedience to pre-natal laws. All the educational institutions in the world, all the benevolent, industrial and reform societies, all the anti-tobacco advocates, all the temperance societies and all the divines in the world, combined and working harmoniously together, can not do as much in a life-time of effort, in the elevation of mankind, as can a mother in nine months of pre-natal effort, whose health and morals, as well as the father's, are good. This is an important question or assertion, and yet is one that has law, right and God on its side, as the law of heredity will teach us, when we come to trace everything from cause to effect.

Dunglison defines "hereditary" to mean a term given to diseases communicated from progenitors. Such diseases may exist at birth, or they may supervene at more or less advanced periods of existence, as family diseases or complaints.

Then, it is required in the generation of healthy, intelligent and well-developed children, both physically and mentally, that the woman have perfect health, and that while there is the remotest indication of any mental or physical disturbance—nervous, inflammatory or chronic, acquired or hereditary—they should not bear children, until they regain their normal standard of life. Women who prevent the normal working of their life's internal economy by corsets, or strictures of any kind, should not bear children, for they can not possibly rear healthy or desirable offspring. If they assert that their smallness of waist is not made by corsets or tight dresses, but as nature made them, the reason is much more palpable that they bear no children, until through proper exercise and living they assist nature to give them a proper form; that she be well formed with full-sized waist and broad pelvis; that she be capable of nursing her own children; that she think more of the vital purposes of life than of the superficial follies and fashions of the day, and that she possess a moral as well as a religious nature.

The man should have no constitutional, acquired or hereditary taint of disease; should be healthy, well formed, and should not have any disgusting or degrading habits; should be a temperate man, as well as moral, truthful and dignified; for in the ruling and guiding of this world, there is absolutely nothing done by chance, from the growth of the smallest insect to that of the largest quadruped; from the falling of a sparrow to the death of a saint, a Christian or a sinner; from the forming of the tiny crystal of dew, to the laborings of the destructive hurricane; in all, and through all, and over all, are God's unchangeable and undeviating laws. In the production of offspring there, too, must be a law, and the non-observance of this law entails on its violators the penalty of a sickly, effeminate, short-lived progeny; while its close observance brings with it an approach to perfection, in form, feature and soul of the new-born. These laws have been recognized in all ages and among all nations.

A portion of the Jewish system of legislation was based on a recognition of the law that children inherited the bodily qualities of the parents. The Greeks noted the same fact. Among the Spartans, indeed, a system of selection from among new-born children prevailed, which, though probably intended only to eliminate the weaker individuals, corresponded closely to what would be done by a nation having full belief in the efficacy of both natural and artificial selections. The object, no doubt, was to keep the nation strong and give to it sons and daughters of great physical ability.

Among the Romans we find certain families described by their physical characteristics, as the Nasones or big-nosed, the Labeones or thick-lipped, the Capitones or big-headed, the Büccones or swollen-cheeked. In more recent times, similar traits have been recognized in various families; the Austrian lip and Bourbon nose are well-known instances.

Peculiarities of structure and the form of family traits, as well as hereditary disease, are interesting to observe. We usually find them introduced without any apparent cause into a family, and afterward they remain as hereditary traits.

A very authenticated case is that of the Lambert family, as mentioned by Montaigne, I believe. The peculiarity affecting this family appeared first in the person of Edward Lambert, whose whole body, except the face, the palms of the hands and the soles of the feet, was covered with a sort of a shell consisting of horny excrescences. He was the father of six children, all of whom, so soon as they had reached the age of six weeks, presented the same peculiarity. Only one of them lived; he married, and transmitted the peculiarity to all of his sons. For five generations all the Lambert family were distinguished by the horny excrescences.

A remarkable case of the transmission of anomalous characteristics is found in the case of Andrian Jeftichjew, who, three or four years ago, was exhibited with his son, Fedor Jeftichjew, in Berlin and Paris. They were called "dog-men," the father's face being so covered with hair as to present a striking resemblance to the face of a Skye-terrier. A correspondent in *Science* speaks of this case as a remarkable illustration of this abnormal growth of the hair, and explains that this hair is not always soft and downy, but may, through pathological conditions, be coarse like that of an adult.

A family of the sixeenth century, however, presented a very similar aspect; in this family the father, son and daughter were all covered, according to description now extant, over the entire body, with long hair, with the exception of a space below the eyes.

The notable case of Julia Pastrana, of Mexico, may also be cited. She was a most repulsive-looking person; the hair of the head, forehead and face being coarse, like ordinary hair, and her cheeks and nose nearly bare.

Another point of interest in these abnormal cases is the tendency shown to heredity. Thrice has this anomaly been developed in the second generation, and once in the Birman family in the third generation.

Sex-digitism, or the possession of hands and feet with six digits each, has occurred in several families as a sudden variation from the normal formation, but after it has appeared has usually been transmitted for several generations. In a branch of a well-known Scotch family, sex-digitism—after continuing for three or four generations—has apparently disappeared; but it still frequently happens that the edge of the hands on the side of the little finger is partially deformed.

Hare-lip, albinism, halting, and other peculiarities commonly reappear for four or five generations.

The tendency to variation shown in the introduction of these peculiarities, even though they may have been eventually eradicated, is worth noticing in its bearing on our views respecting the formation of new and persistent varieties of the human as of other races. It must be noticed that in the case of the human race the conditions not only do not favor the continuance of such varieties, but practically forbid their persistence. It is otherwise with some varieties, at least, of domestic animals, insomuch that varieties which present any noteworthy, even though accidentally observed, advantage, have been practically persistent; we say practically, because there seems little reason to doubt that in every case which has hitherto been observed, the normal type would eventually be reverted to if special pains were not taken to separate the normal from the abnormal form. Hereditary predispositions weaken the vital forces and cause the organization to succumb more quickly to acute diseases and surgical operations; for instance, the effect of intoxicants is plainly seen in the diminished power of the inebriate or his posterity to sustain inflammatory attacks and local injuries. In such subjects, surgical operations are attended with great irritation and danger; a deficient plasticity of the blood greatly retards the healing process; and any internal organ affected with inflammation is liable to extensive suppuration, or to pass into a gangrenous state, with fatal termination; a very slight abrasion of the skin will frequently develop erysipelas or severe inflammation.

It is true, many cutaneous disorders, especially of the face, result from imperfect nutrition, and can not really be traced to any hereditary predisposition; but the great portion of such victims can be traced to lowered vitality by some hereditary causes—for instance, the influence of alcohol. We see its influence on its victim; its influence on his posterity is also conceded by our best authorities; we see the changed condition of the brain, the enlargement of the heart, the diseased condition of the liver and the kidneys, every tissue of the body more or less affected by its effects. Is it any wonder that it leaves its influence to his progeny; will produce in them, by transmission, physical and mental degeneration, and all the neuroses that arise from defective nerve organization, epilepsy, chorea, paralysis, and all grades of mental degeneration, from slight enfeeblement of intellect to insanity and complete idiocy? And, further, the laws which regulate those degenerative changes are similar in their mode of development and action to those that govern congenital degenerative changes, from other inherited causes.

Plutarch, in his essay on "Delays of Divine Justice," thus writes: "The children of vicious parents and wicked men are derived from the very essence of their fathers; that which was fundamental in the latter, which lived and was nurtured, which thought and spoke, is precisely what they give their sons. It must not, therefore, seem strange or difficult to believe, that there exists between the being which begets and the being which is begotten, a sort of occult identity, capable of justly subjecting the second to all the consequences attending on the acts of the first." Plutarch also taught: "One drunkard begets another, as well as any man hereditarily diseased begets another."

Aristotle also said: "Drunken women bring forth children like unto themselves."

Plato forbade the use of wine to the newly married, on account of its influence just at that time. "The fathers have eaten sour grapes, and the children's teeth are set on edge," which is true in all hereditary predispositions caused from hereditary diseases.

And, amid the thunders of Mount Sinai, the finger of God wrote on tablets of stone: "The sins of the fathers shall be visited upon the children. Be not deceived; God is not mocked; for whatsoever a man soweth, that shall he also reap; for he that soweth to his flesh, shall of the flesh reap corruption; but he that soweth to the Spirit (purity), shall of the Spirit reap life everlasting."—Gal. 6: 7, 8. And then in Phil. 4: 8, the race is warned, to male and female alike.

We should avoid all associations with those who are low, vulgar and profane. Particularly we would impress this on women who are pregnant, as their presence and influence are alike contagious. Who, in their pre-natal formation took on the joy, the glory and happiness that appertain to a soul in harmony with God's divine laws, and who during life here maintained their supremacy of character and soul over their unfortunately conceived fellow-beings, and who during the life hereafter will increase and establish that supremacy. The influence of a right birthright on the future welfare of mankind is immense. One soon receives the mold of a frequent companionship, whether the companion be good or bad. All should strive against the reception of groveling, vulgar thoughts. No one can succeed long in keeping himself from vicious acts, whose thoughts dwell, without restraint, upon unchaste subjects.

Purity of life of parents, with healthy organizations, makes a pure progeny, because it imparts the same physical organization as well as mental, and purity of mind, and the only way to secure the first is by the cultivation of the second. Incessant mental occupation is the only safeguard against sin.

Again, Dr. Joseph Parrish, in his work on "Alcoholic Inebriety," considering hereditary inebriates and the alcoholic diathesis, says: "Not only is there a transmission, but a transmutation of disease by heredity. Inebriety may descend as inebriety, but it is just as likely to change the form of its appearance into insanity or other allied morbid manifestations."

Dr. D. G. Dodge, Superintendent of the New York State Inebriate Asylum, writes: "Like all hereditary diseases, intemperance is transmitted from parent to child as much as scrofula, gout or consumption. It observes the law of transmitted disease. It sometimes overleaps one generation and appears in the succeeding, or it will miss even the third generation and then reappear in all its former activity and violence. Hereditary inebriety, like all transmitted diseases, gives the least hope of a permanent cure, and temporary relief is all that can be reasonably expected. Again, the same author, in his work on "Alcoholic Inebriety," considering hereditary inebriates and the alcoholic diathesis, says: "That cases out of the records of 360, as the offspring of intemperate parents, or 1 in 8; 36 had intemperate fathers, or 1 in 10; 6 had intemperate mothers, or 1 in 60; 9 had intemperate brothers and sisters, or 1 in 40; 60 had intemperate ancestors, exclusive of parents, on paternal side 36, or 1 in 10—on maternal side 30, or 1 in 12."

We must conceive it a demonstrated fact, then, that disease is handed to us by hereditary influences; then we must conceive the very natures of the parents will also be handed to the children. Then, during the season of transmitted influence, refrain from all sexual sin; for, if you have not done these things, and have exercised at any or all times the licentiousness that is within you, you have transmitted the qualities that went to make your boy an Onanist or a sensualist and your daughter a prostitute, and you stand before God for this wrong you have done your children. The force and character of the child are received from parents under the law of heredity.

Again, in speaking of diseases as "hereditary," we do not mean that the diseases themselves occurring either in ancestor or parents are actually transmitted to their offspring (who, under those circumstances, would be born with them); but what is really meant is that a certain organic constitution is inherited by the children, which, being likely to undergo that pathological development in the ordinary circumstances of life, is there described by Dr. Lithgow and other authorities as a constitutional predisposition or tendency to disease, the same as the nature and the disposition may be inherited. We do not in the least know what is the intimate nature of a predisposition, neither do I believe there is any authority that has given a definition other than has been given above, but we know that it may be greater or less in different persons, and that it is thought to be very great in the case of such diseases as epilepsy, gout, rheumatism, diabetes, scrofula, tuberculosis, cancer, rickets, syphilis, chorea, insanity, hypochondriaris, neuralgia, apoplexy, paralysis, physical deformities and deficiency of the special senses, premature grayness or baldness, fatty changes in organs, loss of teeth, lepra and psoriasis, urinary troubles, cretinism and hemorrhoids, as well as the disposition in children and their features, form, and general characteristics and habits. As this is a subject for reason, thought and investigation, other than the authorities which we have got, we want advanced ideas on it. Among the many able contributors to the CINCINNATI MEDICAL NEWS, we would like to read some exhaustive articles on this very interesting subject. As yet this subject is enshrouded in much mystery. Mysteries are said to vanish when "illumined by the light of science." By this we must not understand that there are not many mysteries which can not, as yet, be unraveled by poor, finite man; but that there are many, very many, things in nature and the causes of disease which are called mysterious, simply because we, in our ignorance, can not fathom them, covered, as we unfortunately are, by a thick pall of ignorance, in many things, on this subject as well as others, which, when illumined by the light of science, will become as simple and as easily understood as A, B, C. I have faith that whenever the light can be made to show upon the pathway of our investigations, on this, as well as on many other subjects, its mysteries will vanish and we shall proceed successfully in knowledge, as we have done for ages past. We will notice then, that there is a striking similarity in the process of development in the different sciences which have sprung into life by the unceasing efforts of the human mind.

Even if the tendencies are ever so various, they bear to each other in the process of development a striking resemblance, exhibiting, in that respect, a unity of origin and growth in the moral and intellectual sphere analogous to the one we find in the physical world, which is governed by few but universal laws. The reason for this singular coincidence will be found in the identity of their fundamental structures, resting alike upon truth, order and harmony.

The physical world, as well as the moral, is reared upon this same foundation, extending as it does throughout the universe, as far and deep as our eyes, aided by telescope and microscope, can penetrate, or our minds, in farthest-reaching thought, can carry us. Truth, order and harmony prevail everywhere in the physical world. Where we don't find them we may be sure the fault lies in a deficiency of knowledge or perception on our part. Our duty, therefore, is still to pursue our investigations until we have found the sacred trio, and thus have obtained a revelation of new glories. Then the subject of heredity and the many diseases with which the human race is affected, and the cause—being from hereditary predisposition—and the treatment rests with the race while in pre-natal life, presents a question of thought and a subject to be mastered by the thinkers and investigators of the present, as well as for future generations to advance and to control on physiological principles as well as by legislative laws. This heaven-ordained law, to increase and multiply and replenish the earth, is being, in this our age and continent, greatly perverted, avoided, broken, and by ways and means that prevent the carrying out of the spirit of the command, but, with a just judgment, bring the perpetrators to a life of bodily sickness, mental suffering, and, in thousands of cases, are the direct and controlling means of shortening life, and entailing upon our progeny a disease direct, or a predisposition to it, that is to affect generations to come, and which leaves its impress upon a nation's vitals. Now then, to give further proof, let us go back to the book of Genesis, in the days of Jacob—we are told that "Jacob took him rods of green poplar and of the hazel and chestnut-tree, and peeled white streaks in them, and made the white appear which was in the rods, in the gutters and in the watering-troughs when the flocks came to drink, that they should conceive when they came to drink, and the flocks conceived before the rods and brought forth cattle, ring-streaked, speckled and spotted. And it came to pass, whensoever the stronger cattle did conceive, that Jacob laid the rods before the eyes of the cattle in the gutters, that they might conceive among the rods, but when the cattle were feeble he put them not in; so the feeble were Laban's and the stronger Jacob's."

The same law that governed a living organism in the days of Jacob, was created by the same Originator that created that law in the beginning, will sustain it to the end of time, for man feels himself so little in the presence of omnipotent law and nature's vastness—so helpless in conflict with its resistless forces—that he falls down in abject prostration before its various powers. Then, as the human is created subject to this law, it will continue under the same law; the influences and events that are brought to bear on man during his embryonic condition will give their impression to his character, under the same created law. Bring up a child in the way it should go. This refers to the moral government, and has nothing to do with its created power, in the molding, the forming, or the generating power in disease; or that of fixing the predisposition, as this is formed in the pre-natal existence of all races of mankind, and its only remedy, in addition to what we have already dwelt upon, would be education, as well as legislation, against evil, and the elevation of mankind by the cheerful obedience to pre-natal laws. As Jacob gave his flock their white or fancy fleeces, he demonstrated the fact that we, too, bear the imprint on our bodies and in our faces of the existing physical and mental condition of our parents, transferred unconditionally to the embryonic life. Here we give many a blemish, a stripe, to the lives of our children, that otherwise might have been white and fair.

As the earth nurtures the plant-life, and as this depends upon the natural conditions of the soil and its cultivation for growth and perfection, so is the child dependent upon the mother and father for a strong physical organization, and upon them and their progeny for a constitution without a hereditary taint. As the earth mothers all physical life, so do parents lift their children, with their ready sympathies, or individual talents, into the intellectual and moral. No great woman or man ever had an inferior mother or father. But we believe, in giving this thought, there is more of the finer feelings and more of the moral nature that comes from the mother. We will cite a few cases among the many:

Zerah Colburn, our mathematical phenomenon, came by his wonderful gift through the efforts of his mother made in calculation while weaving fancy linen cloths.

The sacred fervor, the tender eloquence of P. P. Bliss' music, were the voicings of his mother's soul.

Byron was the child of a passionate, brilliant woman and a rich, profligate man.

The intellectual father and wise, sympathetic mother of Louise Alcott gave to America one of its grandest women; while the superior capabilities of both father and mother of Frances Willard furnish a vital lesson of inherited attributes.

Does the marriage of cousins affect the children of such unions? Yes. Dr. Carpenter says, in his "Principles of Human Physiology": "Out of three hundred and fifty-nine idiots, the condition of whose progenitors could be ascertained, seventeen were known to have been the children of parents nearly related by blood; and this relationship was suspected to have existed in several other cases, in which positive information could not be obtained. On examining into the history of the seventeen families to which these individuals belonged, it was found that they had consisted in all of ninety-five children; that of these, no fewer than forty-four were idiotic, twelve others were scrofulous and puny, one was deaf, and one was a dwarf. In some of these families, all of the children were either idiotic or very scrofulous, nervous and puny. In one family of eight children, five were idiotic." There is, judged by statistical tables, just cause to avoid intermarriage of relations. Cousins, or blood kin, may marry, and their direct progeny may not suffer, but the generations to come will. Such marriages were prohibited by the Mosaic law, but had been allowed before the giving of the law. The Mosaic law in this respect has never been repealed by the new dispensation. Refer to Lev. xviii. 6, 7, 8; xx. 11; xviii. 9; xx. 17; Mark vi. 17, 18, 19. We could give many more references, but we think we have given enough for the present purpose.

In all ages of the world men have had great confidence in facts. Indeed, science bases all knowledge on the facts of human experience. "No man knows, or can know, more than the facts of his experience teach him," said the great Lord Bacon, the founder of scientific philosophy. But it nevertheless is true that facts alone do not constitute useful knowledge. Experience, unless it is verified by sound reasoning, and found to be in accordance with the laws of nature, is never trustworthy. It may, indeed, teach either truth or falsehood, and whether truth or falsehood depends entirely on the way we interpret it. A false interpretation, and misapplication of facts, is the great, if not only, error of all time. Then, in this respect, we are taught by all authority, both human and divine—we are taught by the laws of nature—that as long as mankind continue in this wrong course of life, and marry and intermarry under these false conditions, so long will we have among us the blind, the deaf, the dumb, the lame, the deformed, feeble-minded, idiotic and the lunatic. The influences upon which mankind may depend for effective and continuous diffusion of human life so that there shall be a constant enlargement both of ancestry and posterity, we should learn to have our children well born. Again, allow us to touch upon the rulers and emperors of foreign countries. We will not take the space to go into detail; only to mention some of them, that they can be referred to as proof. Many of the members of the royal families are intellectually feeble in consequence of intermarriages and the vicious indulgence of their ancestors and themselves. From Julius Cæsar's time and ending with Nero, we have an almost unbroken line of neuroses. Cæsar was an epileptic. Take his ancestors and his posterity and trace them through. We find epilepsy, chorea, imbecility, weak-mindedness, or heartlessness, cruelty and licentiousness. Peter the Great bore traces of family neuroses. Though a man of genius, he was subject to convulsions. Peter's daughter was a hard-drinking woman; his grandson was licentious and coarse, weak-minded, dull, vicious when aroused, and cruel. Refer to King Louis of Bavaria, whose history is familiar to all students. King Otto, who fancied himself a bird and made efforts to fly by beating his sides with his elbows, and would make a nest in imitation of a bird's nest in one of the rooms of his palace and sat on it himself. The emperor Paul, who ascended the throne after Catharine II., was unquestionably deranged. James I., with whom the crowns of England and Scotland were united, was coarse, cruel and sensual in character. It is said but few who have sat upon the thrones of Europe have shown that they possessed equal endowments to the average man. The history of the crowned heads of Europe is indeed very interesting to read.

In search of literature on this subject, we will refer to an editorial in the CINCINNATI MEDICAL NEWS, July, 1886, page 499, that is very interesting, as well as illustrative of this subject. We should learn and pay attention to the laws of transmission and to pre-natal existence, knowing that there is no mortal relation so sacred to us as this of our unborn children. After birth our peculiar work is over. Life's lathe will sharpen or soften the lines; but it is still left for us to teach them God's laws of life, and while careful of their companions, to keep the foolish literature of the day out of the home, and by every earnest effort prevent the polluting stains of immorality and vice and habit out of generations to come. One result of the labors of physiologists has been the clearing of the mental vision, and the gradual comprehension of the great, pervasive and potential fact of heredity. The sins of the fathers shall be visited upon the children, said Moses, more than three thousand years ago. Probably he comprehended in but a very small measure the significance of his own utterance.

Not only do parents transmit to their children their mental peculiarities, their moral tendencies, the features of the face, the stoop of the shoulders and the trick of the gait, but they pass on to them their blood, their brain, their glands, their very soul and life. We do not mean to say that heredity is a tyrant from which there is no escape (for we have been giving our views as to its treatment and its remedies), and that as is the parent in constitution and conduct, so also must be the children to the remotest generation. If that were one of the discoveries of physiology, small thanks would be due to the science from overburdened man. But it is not so. The parent himself, as is well known, can modify and make worse or better both his constitution and his character. Similarly the child's constitution and character may be changed until, by the operation of the law of heredity itself, a not very remote descendant may be the antipode of his early progenitors. The discovery of an existing inherited taint of disease or of vice in a child is not a cause for regret, but for thankfulness. The disease-taint itself is, of course, to be deplored, and so is the inherited vice; but its early discovery is to be hailed with gratitude as pointing out the lines of physical and moral treatment which may lead to the practical enfeeblement of the taint, or even to its eradication.

Many of the laws of inheritance apply alike to man and the lower animals, but as there are striking differences between them, both moral, intellectual and social, we see the laws which govern the brute creation are more easily directed and controlled. In the brute we have first to decide on what we want. In the CINCINNATI MEDICAL NEWS, page 394, September number, 1873, Dr. Nathan Allen, in a paper on "Animal Propagation," read before the State Board of Agriculture, at Barre, says, "* * then seek the best stock. In selecting this we must pay regard to *pureness of blood*, to *pedigree*, and to *thoroughness of breeding*. Avoid defects, whether of structure or function or looks." These directions all harmonize with the great law of propagation, as well as the law of inheritance. In regard to the latter law, we speak more particularly of similarity in the parent. If in them there exists an even balance of organs, the same will be likely to reappear in the progeny. But this is liable to be modified by secondary agents, more particularly by disease, either transmitted or inherited. We should take into consideration the physical condition of the parent stock just before and at the time of begetting offspring. These rules and principles are based on physiology—a science which, though it may be considered in its infancy, yet furnishes us with a law, a great and general law, of propagation, pervading, in fact, both the animal and vegetable kingdoms. This fundamental law is based on the perfection of the whole organization and the harmonious working of the functions of the various organs of the body. It may be defined to be the perfectionism of structure and harmony of function; or, in other words, that every organ in the body should be perfect in its structure, and that each should perform its legitimate functions in harmony with each other. In fact, we find no such perfect standard among animals, but only approximations. The further we depart from this standard, the greater the variations; but these only serve to confirm the general law that like begets like; and the application of two distinct agents produce countless variations, both in classes and individual quality of structure, or fineness of fiber—a matter of prime importance, whether it relates to one purpose or another; whether as affecting the fleetness of a horse, the tenderness of a steak, or endurance of toil. It should be borne in mind that there are limits beyond which we can not pass in aiming at perfection; and also that as we approach the extremes of fineness and coarseness of organization we shall find that animal life decreases more and more.

Having made so long a digression, we will return to the subject of heredity from a political standpoint. We will find in The People's Cyclopedia, Volume II., page 896, Hereditary Privileges and Possessions. The first is hereditary monarchy, "the divine right of kings," now but little urged, being felt to be incompatible with modern notions of the political relations of society; and the defense of the hereditary transmission of the supreme power of the State is rather rested on the ground of political expediency and necessity; the animosities and disturbances of public affairs that attend the ever-recurring election of a head of the State are avoided.

Selections.

Temperature in Fevers.

BY J. ELLIOTT LANGSTAFF, M.D., BROOKLYN.

THE following case will show the absurdity of the general impression that a "temperature of 104° must be energetically combated:"

I was called to see Mrs. X. on November 1. She complained of a slight pain in the head, with mental irritability, loss of appetite, chilly sensations, and pains in the back and limbs; temperature 102°, pulse 98, white fur on tongue. (The nurse, who had been sent to the hospital, had died of typhoid a few days previously.) I gave calomel, gr. ij, and a saline mixture every four hours. The next morning the bowels were well moved and symptoms abated. On the third day the previous symptoms increased in severity, temperature 103.4°, bowels not moved, tongue heavily furred. I ordered calomel, gr. j., night and morning, and the mixture continued. The bowels did not move till the 5th, when the temperature had reached 104°. I ordered acetanilide, gr. j, every two hours for five doses, and stopped all other treatment. On the 6th there was nausea, pulse 120, temperature 104°. Gave quinine, gr. vj. On the 7th pain in the head increased, with intolerance of light and sound and distressing ringing in the ears. All medicine was now discontinued and the ice-cap applied; after seven or eight days the pain almost ceased. From the 4th to the 20th the temperature remained almost stationary between 104° and 105°. After the 5th the bowels were moved every day by an enema, except on the 17th and 18th, when diarrhœa was present, accompanied by a little blood, which was easily checked by opiates. This diarrhœa was preceded by extreme tenderness in the left hypochondriac region, and on the 17th colicky pains. From the 20th to the 22d, temperature 103.6°. On the 23d, morning temperature was normal, evening 104°; from this day on the morning temperature returned to normal, and the evening gradually to 102° on the thirty-fifth day. The diet throughout was almost entirely milk (every three hours) with liquid peptonoids (ʒ j) till the 23d, when the appetite gradually returned and more freedom was allowed. On the thirty-fifth day the evening temperature rose to 104° and appetite disappeared. I then gave quinine, gr. v, at 3 P.M., and calomel, gr. j, in the morning for two days, when the temperature went back to 102°, and on the forty-first day the temperature was normal and remained so. The patient lost a very moderate amount of flesh. The pulse ranged from 110 to 130.

My experience leads me to believe that antipyrine given in the afternoon would have reduced the morning temperature and increased the evening, as a result of the depressing effect of the drug. If the bowels had been allowed to remain constipated for days (as is recommended by some authorities), the continued pain in the head would have been concealed by delirium, caused by the reabsorption of the poison which was leaving the system with the fæces.

I do not wish to denounce the antipyretic treatment of fevers with antipyrine and acetanilide, but I record the fact that a continuous temperature of 104° for seventeen days is not always dangerous.—*N. Y. Med. Jour.*, March 16.

The Work of Insects on a Dead Dody.

When a dead body is discovered it is often a matter of importance to ascertain with a close approach to precision the length of time that has elapsed since death took place. In our treatises on medical jurisprudence this matter is not so fully treated of as to leave nothing to be desired. A case that was lately before one of the New Jersey courts seems likely to furnish a notable addition to our stock of facts bearing on the subject.

The circumstances, which have been furnished us by Dr. Norton L. Wilson, of Elizabeth, were as follows: A divinity student, twenty-nine years old, was last seen alive on the morning of June 24, 1888. Twenty-one days afterward his dead body was found in a wood near Westfield. Its identity was proved beyond doubt. With the exception of a coat and hat, it was fully dressed. The soil in that locality is a black loam, kept moist by a pond about fifty feet distant. There was but little underbrush about the body, and there were no low branches on the neighboring trees, so that a free circulation of air was possible at all times. The mean temperature had been 73.50° F. While it was true that the circumstances were such as to favor rapid putrefaction, it is remarkable that the remains consisted of little more than the skeleton, and this gave rise to the idea that something besides the ordinary processes of decay must have been at work. Most of the skin, the muscles, and a number of the ligaments were gone. What flesh remained was chiefly on the feet, where it was protected by the shoes and stockings. The ligaments of the right ankle had parted, the right ligamentum teres had been destroyed, and a number of the ligaments of the vertebral column, especially of its upper portion, were lacking, together with some of the intervertebral fibro cartilages. The only ligaments remaining intact were those of the knees. A little muscular tissue was still clinging to the tendo Achillis. The scalp had disappeared and the hair was lying on the ground. Not an organ remained and the dura mater was completely stripped from the skull. Some of the ribs had been parted from their cartilages, and not a few of the cartilages were riddled with small holes. The long bones presented a clean white surface, having been stripped of their periosteum; the shorter ones were not so thoroughly denuded. Dr. Wilson is quite sure that there did not remain three pounds of flesh, all told; and by flesh he means skin, facia, muscle and tendon.

A careful examination showed that no bones had been broken, except those of the skull and face, and there was no such evidence of gnawing as one would expect to find if dogs or other large animals had attacked the body. The skull had been broken into a number of pieces. The inferior maxilla had been fractured on the left side at the junction of the ramus with the body, and both condyles broken off. There was a comminuted fracture of the vault of the cranium, with the outer table depressed, and a disc about an inch in diameter was missing from the inner table. The theory was that the man had been murdered, probably with a carpenter's hammer, and his body dragged into the wood. It was thought that the first blow had been dealt him upon the vertex; that by falling forward and striking on his chin, he had fractured the condyles of the lower jaw; and that his assailant had then given him a succession of blows on the left side of the head and face.

Inasmuch as the clothing had not been disturbed, Dr. Wilson is of the opinion that neither birds nor dogs had anything to do with the rapid consumption of the body, but regards it as the work of maggots, beetles and ants, with which the remains were "alive." The ants were of the large black variety. It is not credible, he adds, that in so short a period as three weeks putrefaction could alone have wrought such complete destruction of the tougher membranes as well as all the softer organs of the body. He thinks that the ants were the most active agents in the work. —*Ed. N. Y. Med. Jour.*, March 16.

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The Operative Treatment of Prolapse of the Rectum.

In a recent contribution (*Archiv. f. klin. Chirurgie*, Band xxxviii, Heft 1) Dr. J. Mikulicz, of Konigberff, describes his methods of dealing with prolapsed rectum, and puts on record seven cases in proof of its safety and efficiency. Of prolapse of the rectum there are, it is pointed out, three forms. The first and simplest of these, prolapsus ani, is a mere ectropium of the mucous membrane of the rectum in which the other coats of the gut, especially the muscularis, are seldom involved. In the second form, that of true prolapsus recti, the protrusion consists of all the coats of the intestine and, like the invaginated portion in intussusception, presents on section two tubes of intestine, one within the other, and in contact by their serous surfaces. The third form, to which the name is given of prolapsus coli invaginati, is really intussusception of some part of the colon, and may be readily distinguished from the other forms by the fact that the external layer is not fixed to the anus, and that the finger can be passed into the rectum by the side of the protruded mass.

In cases of chronic prolapsus recti, with ulceration and gangrene of the exposed mucous membrane and a persistent tendency to further protrusion, excision of the protruded portion of the intestine is, according to Mikulicz, the most suitable treatment. The limited excisions devised by Dieffenbach and Dupuytren are, it is stated, often useless and do not guard against prolapse; and cauterization, though a milder proceeding, is still not free from risk and may cause stenosis of the anal portion of the gut. Partial excision and cauterization will, it is true, result in contraction of the relaxed and softened sphincter, and of the immediately superjacent portion of the rectum, and the constricted and rigid extremity of the gut will, if the case be a mild one, resist further protrusion from above; but in too many instances the vis a tergo overcomes this resistance and the cicatricial tissue yields sooner or later to renewed prolapse of the rectum. It is necessary, he states, to shorten the elongated and displaced rectum, and in correspondence with the indication, to resect a large portion of the prolapse. This is held to be the most rational course in all old cases of prolapsus recti, and particularly after relapse.

The operation, described in the paper mentioned, was first performed with success by Nicoladoni, and resembles in some respects one advocated by Esmarch, in which, before resection, the upper part of the prolapsed gut is fixed tightly by ligature to a bougie introduced into the rectum, so as to prevent any exposure of the peritoneal cavity. Mikulicz, after having passed two sutures through the free lower end of the prolapse, in order to stretch and fix in required position the gut, makes a transverse incision through the anterior layer of the prolapsed mass, about half an inch below the anal margin. The inner tube of the prolapse having been thus exposed, the serous margins of the outer and inner layers are brought together by sutures, in order to shut off the peritoneal cavity. The inner tube having been divided transversely along the whole length of the outer incision and the intestinal canal opened, the cut edges of the inner and outer tubes are then fixed together by a second row of sutures. The posterior surfaces of the tubes are then divided and sutured in like manner, and the whole of the prolapse thus detached. In most cases the peritoneal sac does not descend between the layers of gut behind, the space being usually occupied by meso-colon which contains numerous vessels. In this operation Mikulicz insists on the use of silk in preference to catgut for the material of the sutures.—*Lond. Med. Rec.*

The Morphology of Rheumatic Blood.

BY EPHRAIM CUTTER, M. D.

COLOR varies from that of health to that of anæmia.

Consistency and rapidity of clotting increased very much from that of health.

I. The red corpuscles, color usually impaired, but not always.

Coloring matter not so firmly held as in health.

Adhesive, sticky, often drawn out in elongated, lozenger-shaped bodies, with pointed ends; and sometimes stretched out in filaments joining with one or more of their fellows.

Clots in windrows, ridges and huddled masses, sometimes quite formless. This is caused by the massive fibrin filaments holding them fast, as it were, in their firm meshes and their great adhesiveness, being more or less deprived of their coating of neurine. The same condition is found in consumptive blood, but to a less degree. In fibrous consumption, they are much more marked. It may be remarked here that this kinship between consumptive and rheumatic blood is due to an acid condition produced by the growth and development of the acetic acid vinegar plant in the blood and in the alimentary canal. When the blood is aciduous to an unusual degree, the adhesion of the red blood corpuscles is increased still more.

II. The white corpuscles, usually enlarged, stick to each other, to the red corpuscles, to the fibrin filaments, and to the form elements. Indeed, it seems to be the office of the white corpuscles, so far as possible, to swallow, increase, and develop any foreign substance that may find its way into the blood. Thus we find crystalline bodies in the white corpuscles in rheumatism; though not always. They undergo ameboid movements as in healthy blood. They have independent locomotion. Disease does not seem to impair their automatic movements. Often they are increased in number; sometimes diminished in number. If there is fatty degeneration going on anywhere in the system, they will usually be found to contain fat in globules.

III. The serum.

A. Fibrin filaments, in massive and sticky threads in abundance—in meshes which are finer than in health, plainly visible—strong, and hold the red corpuscles like prisoners—in skeins, like the tangled skeins of silk—sometimes in large, long cylindrical frayed; sometimes frayed strings wound up like a string round the four fingers, and embracing the other form elements in the blood; in masses forming thrombi, which when fastened in the caliber of a blood-vessel, forming emboli.

These thrombi are apt to involve and embrace white and red corpuscles and crystalline bodies to be named below. When the fibrin filaments are found in large round strings, handsomely curled up by the motion of the blood stream, and looking like the mycelial filaments of a vegetation that can be distinguished from vegetation by the absence of entire cylindrical outline; ragged, broken edges here and there, and bichotomous and polycotomous divisions of the trunk, different from the mycelial filaments of syphilis, for example. It is the presence of these fibrin filaments, in addition to the stickiness of the red blood corpuscles, that makes the blood ropy, sticky and adhesive in rheumatism. They have the tendency to block up the blood stream, and besides to be locally deposited in and on the adjacent tissues, especially when the circulation is sluggish, around the joints, for example.

B. Fibremia. In a nomenclature which was made before the present advance of knowledge, there is difficulty to make it fit to the new era. I shall not attempt to relieve this difficulty, but try to adapt the subject to the conventional names, as the object is practical aid in treating diseases, no matter what they may be called.

Fibremia is where the fibrin filaments are in excess, in the form of threads, skeins, massive fibres, straight and curled like strings forming the thrombi and emboli. These are in a more exaggerated condition and form than in consumption or rheumatism. Sometimes the fibres look like the scalp when taken from a woman with long tresses of hair.

C. Gravel of the blood, or crystalline bodies in the blood in rheumatism. These are numerous and readily recognized. Some of them are as follows:

1. Uric acid and urates of soda. 2. Phosphates; specially the triple phosphates of lime and soda. 3. Oxalate of lime. 4. Cystine. This is quite common and easily detected. 5. Carbonate of lime, rare. 6. Stelline and stellurin. These occur mostly in granular forms in the serum, but in old cases; where the system is saturated they are crystalline. 7. Black, brown, aniline blue, bronze, orange, red and yellow pigments in the form of flakes or masses are common in rheumatic blood, and may be termed gravelly matters that should have been eliminated by kidneys, bowels or skin, which are the natural outlets for such excretory products.

In fibrous consumption and asthma and hay fever, these gravelly concretions are found in the sputum, as if the air passages were made the abnormal channel of their excretion.

Gravel of the urinary tract, the liver and the gall bladder, of the ducts of the salivary gland, of the vaginal mucous membrane, are examples of metastatic excretion of crystalline bodies from the system, produced to great excess, and thrown off by these vicarious channels.

D. The latent condition of the characteristics of rheumatic blood. The morphological characteristics peculiar to rheumatic blood exist in a latent condition in persons apparently well; but when they are exposed to cold the blood-vessels contract, catch and detain these abnormal elements, and we have a stasis of the blood, which may be active or passive, and manifests itself in heat, fever, pain, swelling, inflammation or passive congestion, effusion, etc., which make up what is known as an attack of rheumatism. The fever may result from the efforts of nature to get rid of the foreign substances and conditions, just as a householder will become hot in expelling from his premises a thief who is difficult to get rid of; or, to use another simile, the attack of rheumatism is like the explosion of a gun—the charge in the gun is the morbid material of rheumatic blood, and the cold is the pulling of the trigger. The charge may be latent in the gun for years, but is there, with its potential energy, ready to become actual from an exciting cause. Just here comes in the practical suggestion: If those who are in health, apparently, should be examined and find their blood has the morphology of rheumatism in a latent condition, or in the pre-rheumatic state, it is a very good time to treat to remove it. As one can draw off a charge from a gun with ease and safety before the trigger is pulled, so is it with the removal of the pre-rheumatic state.

E. Thrombosis: Is where masses of fibrin accrete and consolidate, together or not, the red corpuscles, white corpuscles, crystalline and pigmentary bodies, spores, and mycelial filaments of vegetations, one or all.

When one considers that the arterial vessels rapidly narrow into the capillaries, $\frac{1}{3000}$ of an inch in diameter, and that the thrombi are driven with the rapidity of a race horse by the pulsations of the heart, it is no wonder that these floating thrombi become plugs or emboli in blood-vessels and disturb the circulation. It is a wonder, rather, that the system can stand them so long.

This is G. Embolism. When the embolus is made up of spores of mycoderma aceti, vinegar yeast, and is caught in the lung tissue, it develops tubercle, and so also in the other parts of the body. (Koch's bacillus is only the baby form of the vegetation of the mycoderma aceti, and had been recognized in this country twenty years or more before Koch discovered it.) So senile gangrene of the extremities is caused by fibrinous clots stopping a blood-vessel.

H. The pre-embolic state. As thrombi precede emboli, so they can be detected in the blood before the embolism, simply by the examination of the blood. Thus sudden deaths from embolism, especially from the puerperal state, may be averted by the adoption of treatment which removes the acidity of the blood, and this aid alone renders the microscope an invaluable assistant to physicians who are devoted to their profession, and is sufficient to redeem the microscope from the title of accursed, as given it lately by a divine of New York at a public meeting.

Remarks.—The relation of the morphology of rheumatic blood and fibremia to disease of the heart is very close; for it is at once evident that increased obstacles to the free circulation of the blood, by the massive fibrin filaments, the thrombi, the emboli, the adhesive white-blood corpuscles, the sticky red corpuscles, the gravel, etc., must make more work for the heart to perform, and thus produce hypertrophy, etc. This is more apparent when one considers that if the capillaries of our bodies could be removed, and joined in one straight line, they would reach more than around our globe. This idea will soon be found elaborated in a work entitled "Trophopathy in Heart Disease," about to appear.

Again, it is very easy to see how pains in rheumatism can be physically caused by the presence of gravel in the blood, whose sharp, angular points must cut the delicate tissues.

"The formation of fibrin or the coagulation of the blood only takes place in the vessels when there occurs a slowing of the current or when there is a change in the parietes of the vessels."

The gentleman who made this statement would not have done it if he had been in the habit of studying morphologically the blood of his rheumatic patients for twenty-two years. The fibrin filaments exist in the blood in health, and the elements referred to in this article have been found in the blood of rheumatics, with regular pulsations, who were apparently in perfect health, but who were really in the pre-embolic state. From the rapidity with which these emboli and thrombi disappear from the blood after treatment, there is reason to believe that many of them are dissolved by natural processes, if there is nerve force enough given for this work.

These remarks would not be made had not Bartholow, in the preface to his fifth edition, loc. cit., stated that his work presumes "to represent the present state of medical knowledge."—*Med. Times.*

A Case of Acute Abscess of the Tongue.

BY HENRY R. WHARTON, M.D.,
DEMONSTRATOR OF SURGERY, UNIVERSITY OF PENNSYLVANIA; SURGEON TO THE CHILDREN'S HOSPITAL; ASSISTANT SURGEON TO THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

J. M., aged thirty-four years, consulted me some time ago in reference to the condition of his tongue, which had he said for a few days caused him a little pain, and had felt a little rigid upon motion; he himself was inclined to think he had irritated the organ by more than his usual amount of smoking.

Upon examination of the organ I observed that it was not markedly enlarged, was covered by a whitish-yellow fur, and seemed a little indurated, particularly on the right side near the median line. I was disposed to accept the patient's explanation of the cause of his discomfort, and advised him to abstain from smoking for a few days, and ordered for him a mouth-wash of chlorate of potassium, tincture of myrrh, glycerine and water, and asked him to report to me if he experienced further trouble.

Three days later I was asked to see him at his home, in the country, and when I called upon him I found him suffering great discomfort from the painful and swollen condition of his tongue, which apparently nearly filled the cavity of the mouth and projected some distance beyond the line of the teeth. The organ was greatly thickened, and its under surface was deeply indented by the lower incisors. The dorsum of the organ was covered by a thick, yellowish fur, and there was a profuse dribbling of saliva from the mouth. He was able to make himself understood with great difficulty, but I learned from him that during the previous twenty-four hours his tongue had become painful, and had increased rapidly in size, and that he was able to swallow only liquids, and these with great difficulty. He also stated that he had not been able to rest in the recumbent posture on account of the profuse salivation which caused frequent efforts at deglutition, which were painful, and he also experienced increased difficulty in breathing when he assumed this position. For these reasons he had spent the greater part of the night sitting in a chair by his bed with his head bent forward, thus allowing the saliva to escape freely from his mouth.

Examination of the dorsal surface of the tongue with the finger showed that the organ was much indurated, and just to the right of the median line there was an area of tissue under which I thought I could detect deep fluctuation. I therefore made an incision about an inch or an inch and a half in length through the tissues with a bistoury at this spot into the substance of the organ, and upon introducing a grooved director through the wound there escaped several drachms of thick, purulent matter; the amount of bleeding was insignificant. Within half an hour the patient expressed himself as much relieved, both as regards the pain and the difficulty in deglutition and breathing.

There was some purulent discharge from the wound in the tongue for the next twenty-four hours, and the swelling diminished rapidly, and in three days the organ had resumed its normal size, and there remained only a little induration about the seat of the incision.

Acute abscess of the tongue is a rather rare affection, and it is said to be more commonly met with in young adults than in children or aged persons.

Dr. Gross speaks of the rarity of acute abscess of the tongue, and states that he has never seen a case of acute glossitis terminate in abscess. Mr. Erichsen describes acute abscess of the tongue as an uncommon affection, but states that he has seen several cases; both Professor Agnew and Professor Ashhurst speak of the rarity of the occurrence of this affection. Mr. Holmes, Mr. Butlin and Mr. Fairlie Clark record a few cases.

When acute abscess of the tongue occurs it usually results from acute glossitis, and this disorder has been variously attributed by different observers to exposure to damp and cold, to injury, to the entrance of septic matters, bites of animals, stings of insects, to the injudicious use of mercury, to corrosive substances, and to the influence of certain fevers and eruptive diseases.

Butlin, DeMussy and Duckworth are inclined to look upon acute glossitis as a catarrhal affection, the former authority stating that it may result from the direct action of exposure of the organ to cold, but that in the majority of cases the exposure has been indirect and general, and the inflammation must be regarded as reflex, possibly due, as has been suggested, to reflex irritation of the lingual division of the fifth nerve.

Mr. Holmes thinks that acute glossitis is more apt to be the result of general influences than of local irritation.

Excessive smoking and the too free use of alcohol have also been considered to bear a causal relation to the development of acute glossitis, and I have myself seen this affection occur in a patient during an attack of delirium tremens.

Fairlie Clark says that acute abscess of the tongue is usually preceded by more or less glossitis, and mentions three cases of this affection, in one of which a fatal result followed. In this case the beard of a grain of barley had punctured the under surface of the tongue, and had given rise to an acute abscess at the root of the organ; the patient died on the seventh day, and an abscess the size of a turkey's egg was found upon post-mortem examination, occupying the position of the genio-hyoglossus muscle and the substance of the tongue; the foreign body was found in the abscess cavity.

Dr. Evans, in a series of sixteen cases of acute glossitis which he collected, found that three of the cases terminated in abscess. Dr. W. Meyers reported several cases of acute glossitis, one of which terminated in acute abscess.

In acute abscess of the tongue the onset of inflammatory symptoms is very rapid, and the symptoms presented are practically those of acute glossitis. The patient complains of tenderness of the organ in chewing solid food, and of a sense of stiffness or rigidity to the tongue, which is accompanied by more or less pain, and there is sometimes experienced pain in the muscles of the submaxillary region. In a few hours the tongue begins to swell, and this swelling rapidly increases in size, which is accounted for by the pressure upon the veins and lymphatics, and the organ is protruded from the mouth and is indented by the teeth. The dorsal surface of the organ is covered by a heavy yellowish or brownish fur, and the surface may be dry if it has been long protruded from the mouth; there is also profuse salivation, and the salivary and the lymphatic glands may be markedly swollen.

A patient suffering from acute abscess of the tongue experiences difficulty in talking, and dysphagia may be a more or less marked symptom, and if the organ is greatly enlarged, so as to fill the cavity of the mouth and extend back into the pharynx, the resulting dyspnœa may be so marked as to threaten the life of the patient.

Acute abscess of the tongue may open spontaneously, or there may be localized sloughing of the organ. Mr. Fowler reports a case of acute glossitis which terminated in an abscess in which a spontaneous opening occurred.

The number of fatal results following acute suppuration of the tongue has been sufficiently large to show that the affection is a serious one. The deaths in these cases resulted from dyspnœa, septicæmia, or from pneumonia.

The treatment of acute abscess of the tongue is very similar to that of acute glossitis, and consists in making free incisions into the organ to permit of the escape of the purulent matter. I think the now generally adopted treatment of acute glossitis by free incisions into the inflamed organ prevents, in the majority of cases, the development of acute abscess of the tongue.

If dyspnœa be a prominent symptom, and it is not relieved after the tongue has been fully incised, tracheotomy may then be required; or, if the case be very urgent, laryngotomy, from the ease and rapidity of its performance, may be substituted for the former procedure.—*University Med. Mag.*

Obstetrical Society of Philadelphia—Laparotomy for Intestinal Obstruction.

BY B. C. HIRST, M.D.

THE following case is reported, not because it is an especally rare and interesting one, but because it so clearly emphasizes the importance of early operative interference whenever indubitable symptoms of intestinal obstruction manifest themselves.

Mrs. F., æt. 45; seen in consultation with Drs. Prendergast and Ziegler; she has always been constipated; about five days before I saw her, she had taken a number of aperient pills, as she had not a passage for some days before. The medicine was without effect in moving the bowels, but caused intense abdominal pain. Three days afterward stercoraceous vomiting began. The gentlemen in charge of the case had injected large quantities of water into the bowels without result; no purgative medicine, however, had been administered. We finally agreed to try an injection of glycerine. This was followed by the evacuation of quite a large portion of well-formed fæces. Hoping that we had at last overcome the obstruction, concentrated solution of salts was administered in small doses frequently repeated. This had barely time to act when profuse fæcal vomiting again appeared. An operation was then, of course, determined upon, and performed late at night, with the valuable aid of Dr. Jos. Price's technical skill and good advice, assisted by Drs. Prendergast and Ziegler. The small intestine was occluded by a mesenteric band so tightly that not a particle of fæces could go through. The proximal portion was enormously distended and congested; the distal portion for a length of eight inches was almost black in color, and looked already gangrenous. The band was easily divided. The distended gut was punctured, and a basin full of liquid fæces evacuated. The opening was most carefully sewed up. The discolored portion of the gut was watched for about twenty minutes, while the circulation gradually returned to it, and its appearance much improved. The abdominal wound was then closed and dressed. The whole operation, including the time consumed in watching the strangulated portion of intestine, lasted but thirty minutes. The woman's condition was fairly good afterward, but she soon began to sink, and died of exhaustion thirty-six hours later. The case was complicated by the worst nurse, in the person of a religious sister and relative of the patient, that I ever came in contact with.

Had the operation been undertaken as soon as stercoraceous vomiting appeared, in all probability the woman's life would have been saved. The delay, however, under the circumstances, was natural, and the belief that the obstruction had been overcome seemed justified. The lesson, I think, that this should teach—the lesson, at least, that it has taught me—is to open the abdomen as soon as stercoraceous vomiting occurs; the operation may occasionally prove unnecessary, but then little harm will have been done; more often it will rescue the individual from impending death.

Dr. H. A. Kelly.—I recently operated upon a similar case *in extremis*. An old woman had had stercoraceous vomiting for many days, and was prostrated with a tympanic abdomen, a very rapid pulse, and a deeply furred brown tongue.

I found, at the abdominal section, that the small gut was contracted down into a small cord from the ileo-cæcal valve eighteen inches up.

A prolonged, waiting, do-nothing policy in the hands of an ignorant practitioner had done the work.

If the operator is to give himself and the patient a chance, these cases must be seen early.

Dr. John B. Deaver.—I have seen a number of cases of obstruction of the bowel, and it is astonishing with what freedom physicians will administer aperients in these cases. Dr. Hirst speaks of giving concentrated solution of salts. I recently saw a case where the physician had given six drops of croton oil, and wondered why he did not get any movement of the bowels.

Treves, who has written the best article on this affection, plainly tells us that there are cases which call for large doses of opium from the commencement.

In regard to stercoraceous vomiting, I do not think that it is safe to wait for this symptom. We know that the most common form of intestinal obstruction, in the adult at least, is strangulation by a band. The next most frequent form is volvulus, and the most common seat of volvulus is at the sigmoid flexure. In these cases it is rather the exception to have stercoraceous vomiting until the patient is in *particulo mortis*. In the majority of cases where you have obstinate vomiting not allayed by simple measures, and with this constipation and the evidences of depression, these symptoms will warrant the surgeon in operative interference.

Dr. J. Price.—I am surprised to hear a surgeon say that there is ever an indication for opium in bowel obstruction. I have seen a large number of these cases, but I have never recognized an indication for opium save in a dying patient. It is just these large doses of opium which render the surgeon absolutely powerless. Scarcely a surgeon dares work after a large dose of opium has been given. He is called to see a patient where the physician suspects obstruction. He finds a comfortable patient with all the symptoms masked. It would be impossible to induce such a patient to submit to operation, the only thing that will save his life. Diagnosis should always be made, where possible, before administering an opiate.

The case reported by Dr. Hirst has many points of interest. It was unquestionably a chronic case of obstruction. The bowels were filled with fæces and gas. It is in these cases, where the patients are dying from fæcal poisoning and shock, that we must minimize every detail in our operations. They can not stand a prolonged operation and manipulation of vital viscera like the intestines. Nor will the condition of the viscera permit the introduction of sutures. The suture tracts will become gangrenous. The operation must be performed as quickly as possible. Sometimes you can do nothing more than make an artificial anus with drainage of bowel contents. In this way you may save life and be able to perfect the cure at a later period. The methods of Senn, and one or two gentlemen in New York, by means of disk and ring methods for forming intestinal anastimoses, are valuable and rapid, and will no doubt contribute much to perfect intestinal surgery.

Dr. J. C. Da Costa.—With all due reference to want of success Dr. Price has had with opium, I may say that Mr. Treves is not entitled to the credit of this treatment. If the old editions of Gross' surgery are examined, it will be found that Prof. S. D. Gross recommends opium in intestinal obstruction, and states that a number of cases have recovered under it.

Dr. J. M. Baldy.—With all due respect to Dr. Gross and to Mr. Treves, I do not think that we need be proud of the treatment of intestinal obstruction by opium. We know that intestinal obstruction has a greater mortality than any other abdominal disease. The mortality is simple frightful. Treves mentions two thousand cases occurring in England alone. The use of opium in intestinal obstruction tends to increase the distension and obstruction already existing; and if the degree of obstruction was such that it might have been relieved, it spoils the chance. In addition, no one can make a correct diagnosis with a patient stupefied with opium.

I agree with Dr. Deaver that we ought not to give purgatives. If injections will not relieve the case quickly, we should not wait beyond obstinate vomiting, and stercoraceous vomiting should be absolutely the last symptom that we should wait for.

Dr. John B. Deaver.—With all due respect to Dr. Baldy and Dr. Price, I can not agree with them. This is an important and practical point, especially important to the young practitioner. Opium is called for until the diagnosis is made. In all these cases of intestinal obstruction it is difficult to make the diagnosis. We know that paroxysmal pain of intestinal obstruction is due to peristalsis. We know that opium is not the cause of the distension; this is due to the obstruction. Where we have active obstruction, any form except *ileus paralytices*, opium is of service. Whereas I am in favor of administration of salines in ordinary abdominal surgery, I can not think that they are called for until we have made up our mind whether or not we have intestinal obstruction.

Dr. J. Price.—I have a case which I think will demonstrate the mistake of Dr. Deaver. Day before yesterday my brother was asked to see a patient in whom he suspected intestinal obstruction. He forbade absolutely the administration of opium for the relief of the paroxysms of pain, and gave large enemata. He obtained nothing more than a colic movement. In less than six hours fæcal vomiting occurred, and three or four hour later he did a section for the relief of a strangulated bowel. The bowel was almost gangrenous at points. Salines were administered and four movements followed. The temperature is now normal. The pulse under 90. This was an ideal case, and demonstrates the importance of a clear diagnosis and early work before the patient is dying of fæcal poisoning, collapse and peritonitis. It matters not who first used opium, the cases all died just the same.

Dr. Barton C. Hirst.—I agree with the criticism in regard to the administration of purgatives in these cases. We did not give the concentrated solution of salts until we thought that the obstruction had been relieved. It was given with the view of getting rid of the accumulated fæces. If there had been an idea that obstruction still existed, it would not have been employed—*Progress.*

Surgical Clinics at the Western Pennsylvania Hospital Before the Students of the Western Pennsylvania Medical College.

BY PROFESSOR J. B. MURDOCH,
Surgeon to the Western Pennsylvania Hospital.

[Reported by Will N. Pringle, M.D., a member of the Graduating Class.]

AMPUTATION OF HIP-JOINT.

I HAVE a patient to bring before you to-day who has come here seeking relief from a most grievous condition. He has traveled throughout this and other States in search of relief and hoping to be rid of his malady, but in each and every case to be turned away in despair by surgeon after surgeon telling him that there was no relief for him, and that his case was hopeless. Three years ago this man was a blacksmith and was kicked on the leg by a horse. Soon after a small lump appeared, which grew, at first slowly and hardly perceptibly, later it grew more rapidly, and within the past year it has grown with frightful rapidity, and is now so large as to keep his legs separated and to interfere considerably with his powers of locomotion. I consider this a more than ordinarily sad case. When great men like President Lincoln, President Garfield or Emperor Frederick are stricken down and death seems inevitable, and the best surgeons of the country take up their post by their dying bed, all the world looks on aghast and cries out that men who will thus stand face to face with death are brave men—and so they are. But men like President Lincoln, President Garfield or Emperor Frederick have climbed the ladder of fame, they have attained the highest position in the gift of the people of their respective countries, they have shone in their greatest glory, they have accomplished their greatest good. Such men as these have generally passed the meridian of life; they are in the decline.

Here is a man not yet thirty, comparatively a young man; strong, healthy, robust, recently married and the father of one child; prospects and opportunities for future good just looming up before him, when just in the prime of life he is stricken down by a disease, probably cancerous in its nature, and as deadly in its character as the assassin's bullet, if allowed to pursue its rapid onward progress. What will be required here it is impossible to tell; the operation is in a manner an exploratory operation—it may involve the removal of an immense tumor or it may involve an amputation at the hip-joint. The patient is reduced in strength, and may not survive the operation long enough to be removed to his bed in the ward. It is with a sense of grave responsibility that I approach this operation. These are the cases that will test your skill, your knowledge and your courage. An operation is, however, the only chance that remains for the patient, and it is a duty which no surgeon should shirk. As I have said, he has consulted many physicians, and their opinions have been various. Some diagnosed abscess, others lymphoma, lipoma, sarcoma, and many other states and conditions. I am of the opinion that it is a sarcoma, or an osteosarcoma. Now sarcomata, as you know, are cancerous in their nature and prone to return, and a very good rule in surgery is that, where sarcoma attacks a bone, the whole bone should be removed.

A few years ago a lady suffering from an osteosarcoma which had attacked the femur just above the knee, applied to me for relief. I amputated the limb at the upper third of the thigh, thinking that at that point I would certainly be in sound tissue. The patient made a good recovery, but after six months the disease returned with all its virulency, and then I wished that I had removed the limb at the hip-joint. I would therefore advise you that, in all cases, where sarcoma attacks a bone, you remove the entire bone; always go to the joint next above the seat of disease.

Sarcoma, as regards the form of its cells, is of three varieties; *i. e.*, the round-celled sarcoma, which is the most malignant in its nature; the spindle-celled sarcoma, which next approaches it in malignancy; and the giant-celled sarcoma, which is the least malignant. They are all, however, likely to return after removal, unless they are completely eradicated by a most thorough operation. Inasmuch as this has been diagnosed an abscess by some surgeons, and in the hope that they may be right, I will insert an aspirator needle well into it and see what we may be able to obtain. You remember that the history of this case was that at first it grew slowly, but as it grew in age it increased in rapidity, and now has attained a size exceeding that of the fœtal head. No fluid can be induced to flow through the aspirator, although the point of the needle is movable and feels as though it were in a cavity. I will therefore prepare to remove the tumor or amputate the limb at the hip-joint, as may be required. I elevate the limb to a right angle to the body, and carefully endeavor, by stroking the skin from the toes toward the body, to drive the blood from the limb. I will apply an Esmarch's bandage the entire length of the limb, pass it around the perineum and carry it well up over the crest of the ilium. A roller bandage will serve as a compress to control hæmorrhage from the external iliac, while the other end of the rubber bandage will compress the branches of the internal iliac which have an exit from the pelvis at the great sciatic foramina. An assistant will make steady traction on the ends of the rubber bandage. This method of controlling hæmorrhage was first introduced by Mr. Lloyd, of Birmingham, England, and has proved a very efficient method.

As I make an incision and pass my finger into the tumor I at once find a cavity with firm walls and filled with blood clots and a soft encephaloid or brain-like substance, which oozes through the wound. I find the limb is excavated or honeycombed almost throughout its entire thickness, the cavity extending across the bone into the outer side of the leg. It also extends upward, involving the capsular ligament and the joint. In view of the fact that the disease has gained such a foothold, and that the destruction of tissue has been so great, no operation can prove of any avail for this man except the amputation of his leg at the hip-joint. In this opinion I am sustained by my colleagues, Drs. McCann, Hamilton and King. Even this, I fear, will be but a respite or prolongation of the man's life; but as it is the physician's province to prolong life, we are justified in making the attempt, however desperate may be the chances. The limb being now removed is not sufficient; all of the diseased tissue remaining in the stump must be dissected out, or a speedy return of the disease would result. In deference to the general opinion we will not trust to torsion, in this case, to control the hæmmorhage, but strong catgut ligatures will be used. All of the hæmorrhage must be controlled before the wound is closed, for fear of hæmorrhage into the wound, causing wound tension. A rather large sized drainage-tube will be inserted and the wound will be closed by silver sutures. The usual antiseptic dressings will be applied and the patient will be at once removed to bed. Stimulants, such as brandy, whisky and ammonia, will be given to him, and he will be surrounded by bottles of hot water, in order to assist reaction. If he does well, which we hope that he will, the dressings will not be disturbed for several days, at which time the drainage-tube will be removed.—*Journal.**

Microscopy.

The Microbe of Tetanus.

BY CRITZMANN.

THE theory that tetanus is an infectious disease, admitted in Germany since 1884, has not yet obtained its naturalization in France. With the exception of M. Vernead and his brilliant phalanx of pupils, the surgeons and eminent men of France have shown great mistrust with regard to the theory. The recent work of Dr. Ketasato, communicated to the Congress of Surgeons lately held at Berlin, should, it appears to us, shatter the convictions of those who have contested more or less vigorously the infectious and contagious nature of tetanus.

Since the celebrated experiments of Carle and Rattoni in 1884, who provoked frank paroxysms of tetanus in rabbits inoculated with the pus taken from the surface of a wound of an individual who had succumbed to this disease, science has advanced with immense steps. Once the transmissibility of tetanus established, the discovery of the pathogenic agent was but a question of time; and, in fact, in 1885 Nicolaier found in the superficial layers of ground recently cleared, bacilli in great abundance. These bacilli, inoculated into mice, rabbits and guinea pigs, determined a tetanus type with fatal issue. Two years later Rosenbach demonstrated the presence of these very bacilli of Nicolaier in ground that had provoked human tetanus, and this discovery was confirmed at different times and by different observers. Nevertheless some modern researchers contested the specificity of the brush-like bacillus of Nicolaier; this opposition is the more plausible, that up to the present time the pure culture of the tetanigenic micro-organism in an artificial medium has not yet been realized.

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*March 9.—This patient lived for three weeks and died suddenly from secondary hæmorrhage. A post-mortem examination showed that the carcinoma had extended into the pelvis, and involved the common iliac artery.

Now comes Dr. Ketasato and produces the wanted proof. A young man aged 23 succumbed to tetanus. Dr. K. studied the pus of the wound, the point of departure of the tetanus, and there found the setiform bacillus. The inoculation of the pus into rabbits was attended by positive results. The only thing necessary therefore to obtain a pure culture, was to isolate the micro-organism.

This is the method pursued by Dr. K.

He placed the pus from the wound in tubes containing solidified blood serum and agar-agar, and set them in a hot chamber at a temperature of 36—38° C. Twenty-four hours afterward the micro-organisms contained in the pus commenced to sprout. The culture examined at this stage disclosed, among other microbes, some rare setiform bacilli, the number of which became more notable after a sojourn in the hot chamber of 48 hours. At this time the culture was put into a bath heated to 80° C and allowed to remain therein for one hour. With this culture, which could not contain anything but spores in the living state, some mice were inoculated; these all succumbed to a most characteristic tetanus. The culture must therefore contain the spores of the tetanigenic bacillus. Dr. K. cultivated them upon plaques, the classic method, and inclosed vases into which a current of hydrogen was directed. All these cultures were kept at a temperature of 18—20° C. A week later the plaques were found absolutely sterile, whilst in the closed vessels with hydrogen, rather abundant colonies had begun to form. Ten days later one of these small vases was opened; a microscopic examination revealed bacilli smaller than those of malignant edema, now isolated, now developed in long filaments.

These bacilli were thus anærobic; habitual cultures were made of them partly on agar-agar, partly in tubes of Liborius; after a sojourn of 38—48 hours in the hot chamber, these cultures were in full proliferation. The bouillion was not at all troubled. The microscopic examination demonstrated the presence of a spore at one of the extremities of the bacillus.

With these cultures, indubitably pure, Dr. K. inoculated some mice, and was able to reproduce a typical tetanus in twenty hours after inoculation. Two or three days afterward the mice succumbed.

Dr. K. was thus in a position to study more fully the properties of this bacillus. The bacillus of Nicolaier is a micro-organism absolutely anærobic. It vegetates well under the influence of hydrogen. Carbonic acid prevents its development. The best culture mediums are agar-agar peptonized, and feebly alkaline and gelatine. It liquefies the gelatine progressively, by giving rise to a gaseous development. The blood serum, likewise the agar-agar, are not liquefied. When to these mediums there is added 1—2 of grape sugar (sucre de raisin) the vegetation of the bacillus becomes more intense. It sprouts equally well in bouillon peptonized, slightly akaline, and subjected to a current of hydrogen. The cultures of the tetanigenic bacillus have a most repulsive odor.

The culture by generation does not in any way diminish the virulence of the bacilli. The temperature most favorable to the culture is between 36 and 38° C. The cultures on gelatine kept at a temperature of 20—25° C do not proliferate till after the lapse of some time; about three or four days. On plaques and under hydrogen at a temperature of 18—20° C, the bacillus does not sprout until in about a week. Below 18° C the cultures remain sterile. At 36° the cultures contain spores after a sojourn in the hot chamber of about 30 hours. The spores are circular, and occupy one of the extremities of the bacillus. They resist a moist temperature of about 80° C, but succumb to a temperature of 100° C after a sojourn of five minutes. Plunged for ten hours into a solution of carbolic acid 5 to 100, they lose nothing of their virulence; this disappears, and the spore dies off if it be allowed to remain therein five hours longer. Solutions of sublimate (hydrarg bichlor.) 1 to 1,000 kill them in thirty minutes.

Detached, the spores remain virulent for months, especially if care be taken to mix them with sterilized earth. The tetanigenic bacilli are mobile; heat augments their movements.

Inoculated into mice, the bacilli taken from pure cultures, determine regularly after inoculation of 24 hours a typical tetanic paroxysm. The animals generally succumb in one to two days. Almost all laboratory animals fall under the noxious influence of the bacillus of Nicolaier. It is only a question of quantity. The quantity of the culture should always be proportionate to the size and weight of the animal experimented upon.

Foreign bodies, as cotton batting, splinters of wood, are not necessary for the production of tetanus.

The tetanic manifestations always set out from the point of inoculation, and propagate themselves from thence to the rest of the organism.

If the inoculation be made in the rear train of the animal, the contractures appear first in the muscles of the posterior members; if, on the other hand, the inoculation be made on the nucha, it is the occipital muscles which first show contracture.

Autopsy, as well as inoculation, with divers organs, as the lungs, spinal cord, nerves, muscles, blood, spleen, liver, etc., are absolutely negative. It would result that the tetanigenic bacillus disappears rapidly from the organism of the animal when inoculated with pure cultures. Their action is therefore sufficiently mysterious. Have we here to do with a chemical influence exercised by the substance secreted by the bacillus and analogous to that isolated by Brieger? Dr. K. puts the problem without solving it. — *Trib. Medic.*

DR. PELLETAN ON AMERICAN OBJECTIVES.—In his review of the last volume of the Proceedings of the American Society of Microscopists (Columbus meeting), Dr. Pelletan, after paying a very high compliment to the beauty of the work and the great value of several of the papers, notably those of Professors Kellicott and Burrell, in referring to the paper of Dr. Detmers, says: "The Doctor reaffirms that the best German objectives are in no way superior to the best efforts of the best American opticians. I have said in a former article how thoroughly tenable I hold this assertion to be, and declared that I agreed in it completely. I believe that I was first to declare (a long time ago) that poor Robert B. Tolles, so unhappy in his too short career, so long misunderstood in his own country and ignored abroad, was the greatest optician in the world, and I am prepared now to prove that he has never yet been surpassed. I therefore desire to associate myself with Dr. Detmers in the words above quoted, and with which he closes his communication." Strong words these; but while agreeing with Dr. Pelletan (and Dr. Detmers) in all that he can say concerning the excellence of the work of Tolles, I believe that the elder Spencer, who soon followed his friend Tolles to the Silent Land, was as good as Tolles. I believe further that his son, Herbert Spencer, is second to no living optician; that Gundlach has produced and is producing objectives the excellences of which can not be duplicated in Europe to-day, and that for certain grades of objectives those of Bausch and Lomb are absolutely incomparable. American opticians have absolutely nothing to fear in competitive contests, so far as excellence of work goes, with any in the world. I have no patience therefore with Americans who are sending abroad for microscopes and objectives. They can get better at home for the same expenditure of money.—*St. Louis Med. and Surg. Jour.*

Gleanings.

Abscesses of the Liver.—At a meeting of the Academy of Medicine, M. Chauvel spoke of four cases of abscess of the liver, which he had treated in soldiers sent home from Tonkin.

In two cases the abscess was in the right lobe, and in the two others it was in the left lobe; both of these cases were fatal.

The incision presented no difficulties, and it corresponded to the point of exploratory puncture. The conclusions which the doctor draws are as follows:

1st. Direct opening of abscesses of the liver with a knife causes no danger of peritonitis, if done antiseptically.

2d. The incision must be free and lead directly to the abscess. As the liver rises up after the fluid has been evacuated, it is advisable to make the opening as high as possible, and if the cut should contract by the drawing together of the ribs, it may be necessary to resect one or more.

3d. It is useless, and possibly dangerous, to suture the liver to the parietal wound.

4th. Incision must be made early, and exploratory punctures are indicated as soon as pus is suspected.

5th. It is almost impossible to recognize multiple foci surely enough to permit of intervention in the presence of an accessible tumor. In these conditions a wide opening of the principal focus causes one of the scources of infection to disappear, and favors the opening of secondary abscesses into the principal cavity.

6th. The abscesses of the left lobe are more dangerous, as may be explained by the possibility of a pericarditis by contiguity, and also by the probability of collections of pus in the already enlarged right lobe.—*Bulletin Medical.*

TOTAL EXTIRPATION OF THE SCAPULA FOR MALIGNANT GROWTHS.—By Dr. P. Sendler.—The author reports a case of total extirpation of the scapula for an extensive sarcoma in a young woman 23 years of age. The patient survived the operation, but died shortly after of a local recurrence with metastatic growths in the pleura and lungs. From a study of the literature Sendler concludes that total extirpation is superior to partial removal of the scapula in cases of malignant growths of the bone. The arm should be preserved, if possible, but the glenoid cavity is to be excised, even if not diseased. If the growth has invaded the arm, the removal of the entire upper extremity is preferable to the resection of the head of the humerus. The line of incision should be adapted to the conditions present. The author, in his case, made an incision above and parallel to the spine of the scapula, and extending from the acromion process to the superior angle of the bone, and another from this point along the vertebral border of the scapula, extending somewhat beyond the inferior angle.—*Archiv für Klinische Chirurgie.*

HEMOPHILIA AND CIRCUMCISION.—It is stated in a French medical journal that the Talmud provides that, in case two children in one family have died from hemorrhage following circumcision, any subsequent male children shall not be circumcised.

A COIN IN THE URETHRA FOR NINE YEARS.—At the meeting of the Royal Society of Physicians of Budapest, March 30, 1889, Dr. Joseph Prochnow related the case of a young man, aged 24, who had introduced a small coin into the urethra nine years before, ostensibly for the purpose of preventing escape of the semen during coitus. The foreign body gradually slipped further and further backward, but produced no difficulties in urination until quite lately. The patient had meanwhile married, and was the father of two children. Palpation of the perineum revealed a small hard body, corresponding to the edge of the coin. A urethral forceps was introduced and the encrusted coin successfully removed.—*Allgemine Wiener Mediz. Zeitung.*

TREATMENT OF MALIGNANT DISEASE OF THE UTERUS.—Dr. G. E. Schoemaker (*Polyclinic*, May, 1889) states that from an operative point of view there are three periods in any form of malignant disease of the uterus.

1. Early, when operation should be immediate and as radical as possible, without extirpation of the uterus
2. Intermediate, when, eradication being impossible, nothing should be done unless demanded by severe hemorrhage or extreme pain. The length of this period is indefinite, and depends on the rapidity of growth.
3. Late, when scraping and burning may be done repeatedly, to palliate symptoms and retard growth.

PALPATION OF THE KIDNEY.—At a recent clinic, Prof. Guyon spoke lengthily on the above subject and on the amount of information which could be obtained by this method of examination.

When the kidney is normal, the palpation is negative. This mode of exploration only gives results in pathological conditions.

The patient is placed in the position of perfect muscular relaxation—that is, flat on the back with the legs stretched out. Palpation is only made during expiration. Both hands are used, one hand going back of the patient, in the lumbar region, and the other being placed parallel to the median line immediately below the costal cartilages. In most cases when there is no pain, the kidney can be perfectly mapped out. The points gained by palpation are, sensibility of the kidney, increase or decrease in size, mobility, displacement, and consistency.

Sensibility or pain of the kidney is an important point, as it only exists in pathological conditions, the normal kidney not being sensitive to pressure.

When the kidney is increased in size, it is easily felt below the ribs, and the slightest increase in volume may be made out.

Mobility and displacement of the kidney can be made out by these signs, the lumbo abdominal mobility giving the sensation of ballotement; the abdomino-lumbar mobility, which consists in the return more or less complete of a tumor previously abdominal to the lumbar region, finally the movements communicated to the kidney by respiration.

Consistence of the kidney can be made out, such as different degrees of induration; but fluctuation can not be made out.—*Concours Medicale.*

CANCRUM ORIS, AND ITS SUCCESSFUL TREATMENT BY THE LOCAL APPLICATION OF CORROSIVE SUBLIMATE—Drs. Yates and Kingsford report in the *Lancet* of May 4, three cases of this fatal disease, which were successfully treated by corrosive sublimate in the following manner: The sloughs were immediately cut away, as far as possible, with scissors, and the surface freely swabbed with a 1 in 500 solution of perchloride of mercury, and dressed with lint kept constantly wet with a similar solution (1 in 1,000). This dressing was continued every twelve hours until the surfaces were perfectly clean and healthy, when the mercurial lotion was discontinued. The first of the author's cases was treated by the application of fuming nitric acid, without any marked result, and it was then decided to try the efficacy of the solution of the perchloride of mercury, on the assumption that the disease was probably due to some micro-organism.

Book Notices.

A SYSTEM OF OBSTETRICS BY AMERICAN AUTHORS. Edited by Barton Cooke Hirst, M.D., Associate Professor of Obstetrics in the University of Pennsylvania; Obstetrician to the Philadelphia and Maternity Hospitals; Gynecologist to the Orthopedic Hospital, etc. Volume II. Illustrated with Two Hundred and Twenty-One Engravings on Wood. Large 8vo. Pp. 854. Leather. Philadelphia: Lea Brothers & Co. Price: Cloth, $5.00; Leather, $6.00; Half Russia, $7.00. *Sold by subscription only.*

This volume forms the final volume of the *American System of Gynecology and Obstetrics* announced to be composed of four volumes—two on Gynecology edited by Matthew D. Mann, A.M., M.D., Professor of Obstetrics and Gynecology in the University of Buffalo; and two on Obstetrics, of which the second one is now on our table, edited by Barton C. Hirst, M.D., Professor in the University of Pennsylvania.

This great work of four volumes, now completed, aggregates 3,612 pages, with 1,092 engravings, and eight full-page colored plates. The distinguished Dr. Fordyce Barker, of Bellevue Hospital Medical College, thus speaks of it: "I regard the work as very valuable, by far the most so of any, on the subjects of which it treats, which have appeared from the American press, and I think I may safely add from that of any nationality. I am particularly proud of it as a work by American authors. All the papers are quite remarkable for their uniform excellence. There is not a single paper that the profession will not regard as most valuable. I can not doubt that the work will take rank as the best which has appeared on the class of affections of which it treats."

We described at length the volumes upon Gynecology as they appeared, setting forth their merits as they appeared to us. We have now to do with the part of the work devoted to Obstetrics, the two volumes upon which complete the work.

The contributors to the second volume of Obstetrics are eleven in number, namely: James C. Cameron, M.D., Professor in McGill University, Montreal; Edward P. Davis, A.M., M.D., Demonstrator of Obstetrics in Jefferson Medical College; G. E. De Schweinitz, M D., Ophthalmic Surgeon to the Philadelphia and Children's Hospitals; Harold C. Ernst, M.D., Demonstrator of Bacteriology in Harvard University; Henry J. Garriques, A.M., M.D., Professor in New York Post-Graduate School and Hospital; Robert P. Harris, M.D., Philadelphia; Barton C. Hirst, M.D., Associate Professor in the University of Pennsylvania; James H. Lloyd, M.D., Neurologist to Philadelphia Hospital; Theophilus Parvin, M.D., Professor in Jefferson Medical College; J. Lewis Smith, M.D., Professor in Bellevue Hospital Medical College; Stephen Smith, A.M., M.D., Professor in the University of the City of New York.

No work on obstetrics has ever been published in this country that possesses the merit, as a work of reference for practitioners of medicine, as this one. All the subjects which make up the principles and practice of obstetrics are fully treated by gentlemen who have obtained eminence for their researches in the departments in which they have essayed to instruct—therefore each one may be regarded as an authority on those subjects which he has written and has contributed to the work. Under the circumstances, what is taught can be regarded as the latest, and in accordance with the accepted views of obstetricians. Much that is set forth in a work written by one person, however learned he may be, is necessarily second-hand, for the researches of one person must be limited, and he can not be regarded as authority on those subjects which he has not had the opportunity to investigate. But in a work like the "American System of Obstetrics," in which every contribution to it has been written by one who has given special attention to the subject to which it is devoted, the views to which each contributor gives expression are his own, for he has studied them and proven them.

It is not our wish to give fulsome praise to any work, but we think if our readers will consider how this work upon obstetrics has been prepared, and will notice the names of those who have taken part in preparing it, they will not consider, we feel sure, that we commend it above its merits. We have no doubt but that it will meet with an extensive sale.

The mechanical execution of the work is excellent. It is printed on the very best quality of paper, and the binding is the best.

A Manual of Instruction for Giving Swedish Movement and Massage Treatment. By Prof. Hartwig Nissen, Director of the Swedish Health Institute, Washington, D. C.; late Instructor in Physical Culture and Gymnastics at the Johns Hopkins University, Baltimore, etc. With twenty-nine Original Wood Engravings. 12mo. Pp. 128. Cloth. Philadelphia: F. A. Davis, 1231 Filbert Street. Price, $1.00.

Pehr Henrik Ling, a Swede, was the originator of the Swedish Movement Cure. Our author says that he was only a fencing-master and instructor of gymnastics. His attention was drawn to the movement treatment because he had cured himself of rheumatism in the arm by gentle percussions. He studied anatomy and physiology, and the influence of the movement and manipulations in different chronic diseases, and then founded a system of gymnastics founded upon a knowledge of physiology.

"Swedish Movements" consist in the use of active gymnastics and of passive movements for the cure of diseases, or of such diseases as it is proper to treat in this manner. "Massage" consists of rubbing and kneading.

The author does not profess, in this little work, to give such full instructions in the treatment of diseases, by the "Swedish movement" and by "massage," that whoever might study it could become experts in their use, but merely to afford correct information as regards the principles involved in their operation in curing diseases, and to so instruct physicians in their use as to enable them to use them in the treatment of some affections in which no machinery would be required.

The author states that the following results are obtained by passive movements:

"1. Extravasations occurring about dislocated joints are, by pressing and rubbing the tendons and ligaments in which they are imbedded, finally liquefied, and thus more quickly absorbed.

"2. In stiffness of joints the contracted muscles and tendons are forcibly but gradually elongated, and any existing exudations or vegetations within the joints are disintegrated and absorbed.

"3. By the forcible stretching of the muscles their nerves are likewise stretched, molecular changes being thus set up in both.

"4. Forced extension of the muscles causes pressure in their blood and lymphatic vessels, thus accelerating the circulation.

"5. Finally, such muscles as have by rheumatic or neuralgic pains been kept in a state of inactivity have some of their much-needed exercise restored to them. Passive movements thus form in certain diseases, as in neuralgia and rheumatism, the introduction, as it were, for the more painful active motions which have to follow."

In proof of the efficacy of massage treament it is stated that the Supreme Medical Board of Russia appointed two members of the Medical Council to investigate and report upon it. This committee made the following report:

"Experience teaches us the usefulness of the institution, as many patients thus treated have recovered their health after having suffered from diseases which could not be cured by other remedies."

Though the Swedish movement and massage have been employed a good many years in the treatment of many diseases, yet not a few physicians have very imperfect notions of them as therapeutic agents. This little work will give such correct ideas of their use, how they are used, and in what affections they are beneficial, for the scientific specialist who administers them does not claim that they cure all diseases, as does the quack who does not understand the scientific principles involved in their application, and is more likely to do harm in administering them than to afford benefit.

THE PHYSIOLOGY OF THE DOMESTIC ANIMALS. A Text-Book for Veterinary and Medical Students and Practitioners. By Robert Meade Smith, A.M., M.D., Professor of Comparative Physiology in the University of Pennsylvania; Fellow of the College of Physicians and Academy of the Natural Sciences, Philadelphia; of the American Physiological Society, etc. With over Four Hundred Illustrations. 8vo. Pp. 938. Philadelphia and London: F. A. Davis. Cincinnati: R. Clarke & Co. Cloth. Price, $6.00. Sheep, $6.75.

Prof. Smith's work on the *Physiology of the Domestic Animals* is the only work of the kind in the English language. This fact makes it of especial value, for, heretofore, our knowledge (that is, of English students) of the vital processes of the lower animals has been but a matter of inference, consisting of deductions from our knowledge of those processes in human beings.

In lecturing in the Veterinary Department of the University of Pennsylvania, the author says that he has found it a serious disadvantage that the students are compelled to rely solely on the notes that they may be able to take during the lectures. While French students, he states, have access to the encyclopedic work of Colin, and those familiar with the German language to the admirable works of Schmidt–Mulheim, Bruckmüller, Munk, Ellenberger, Gurlt, Thanhoffer, Müller and others, English-speaking students have absolutely no work to which they can turn to obtain any application of the laws of physiology to the functions of the domestic animals. Commenced originally as outline notes for the author's own use in lecturing, this work has been published at the request of his students, in the hope that it may supply them with an exponent of the laws of modern physiology applied, as far as possible, to the functions of the domestic animals, and that a recognition of its shortcomings may stimulate investigation of this much-neglected branch of physiology.

The work begins with a discussion of the origin, history and development of cells. We presume the author reasoned that, as his work was a physiological one, he should begin at the beginning of organic life; that as every living object, from man down to the smallest animalcule invisible to the naked eye, is built up by associations of microscopic units or cells, he should commence his work with an account of cells. But it seems to us that as human physiology will naturally be studied before his work, or any other work, on the physiology of the domestic animals will be taken up, the description of the development and structure of cells might have been omitted from the volume, or merely alluded to. All works on human physiology treat of cells at length, and, consequently, when the student will take up the work of Dr. Smith he will find many pages devoted to subjects with which he is already familiar. In making this criticism we do not do so because we wish it to be inferred that an account of cell formation is not appropriate to the work, for it is entirely so, and would be very necessary if those for whom it was designed were expected to obtain from it alone their physiological knowledge. But if the study of human physiology will precede that of the domestic animals, why multiply the pages and increase the size of a work upon the latter by treating at length subjects that have already been studied? But the volume has too much merit for us to make objections to it for the reason that it contains matter found in other works.

The work is divided into three parts. Part II. treats of Special Physiology; and this part will be found highly interesting, containing as it does much information that can only be found scattered through many works. In the various sections the diet of animals is discussed and the different kinds of foods described. The author states that beans are seldom used as a green fodder, or as the principal article of diet, as they are too rich in nitrogen. Peas, however, both as a green fodder and as grain, form highly nutritive food. Green peas are especially good as a food for milk cattle, and give a pleasant taste to the butter. The grains are best given chopped up with straw, when they form an excellent food for draught horses, of which amounts equivalent to half of the ordinary corn ration may be given. They are also a fattening food of the first rank for hogs, and, like barley, greatly improve the character of their fat and flesh. Pea-straw should be given sparingly to milk cattle, as it diminishes the quantity of milk.

The work contains so much of interest in regard to the diet of animals, that we regret we have not space to copy from it at length.

The work, of course, describes the digestive apparatus of the various orders of animals, the herbivora, carnivora, omnivora, etc., and their methods of digestion. In fact, it is full and complete in the presentation of all information pertaining to the physiology of the lower animals, especially domestic animals. Cuts of the various organs of different animals accompany the descriptions of them.

Part III is devoted to an account of the reproductive functions and the reproductive processes of animals.

Dr. Smith has produced a work which will give him the highest standing as a physiologist. We propose to refer to the work again, after we have had more time to study it.

TRANSACTIONS OF THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION. Volume I. Session of 1888. Birmingham, Alabama, December 4 to 6. Organized 1887.

We welcome to our table this, the first, volume of the Transactions of the Southern Surgical and Gynecological Association which has just been issued. It forms a handsome octavo volume, in cloth, of 318 pages.

The annual address was delivered by the President, W. D. Haggard, M.D., of Nashville, Tenn. It was brief, but contained much interesting matter. A large number of valuable papers were read by members. Among them we notice the following: On the Operation of Gastrotomy, with a Report of a Successful Case, by W. B. Rogers, M.D.; Operative Procedures in Hypertrophy of the Prostate, by R. D. Webb, M.D.; Cystoscopic Exploration, by A. V. L. Brokaw, M.D.; Electrolysis in Morbid Alterations that are Produced in the Prostate by Gonorrhea of the Urethra, by

John D. S. Davis, M.D.; The Medical Treatment of Fibroid Tumors of the Uterus, by Bedford Brown, M.D.; A Successful Vaginal Hysterectomy for Carcinoma Uteri, by W. H. Wathen, M.D.; Two Cases of Vicarious Menstruation, in One of Which was Floating Kidney, by De Saussure Ford, M.D.; Laceration of Perineum and Rectocele, by J. H. Blanks, M.D.; Aphorisms in Antiseptic Surgery and Gynecology, by F. T. Merriwether, M.D.

The titles of the papers, which we have quoted at random, do not constitute half of the papers which were read at the meeting. All the papers were able, and a number of them of unusual merit. The report of Dr. Rogers, of a successful case of gastrotomy, was highly interesting. Dr. F. T. Merriwether's Aphorisms in Antiseptic Surgery and Gynecology should be in the possession of every physician of this country.

The following are some of the officers elected for 1888-89: President, Hunter McGuire, M.D., LL.D., Richmond, Va.; Vice-Presidents: W. O. Roberts, M.D., Louisville, Ky., Bedford Brown, M.D., Alexandria, Va.; Secretary, W. E. B. Davis, M.D., Birmingham, Ala.; Treasurer, Hardin P. Cochrane, Birmingham, Ala.

The Association adjourned to meet in Nashville, Tenn., on the second Tuesday of November, 1889.

It is to be hoped that, at the next meeting, many medical gentlemen of the Northern States will be present. They will undoubtedly be made welcome.

THE PSYCHIC LIFE OF MICRO-ORGANISMS. A Study in Experimental Psychology. By Alfred Binet. Translated from the French by Thomas McCormack. With a Preface by the Author written especially for the American Edition. 12mo. Pp. 120. Cloth. Chicago: The Open Court Publishing Co., 169 La Salle Street. Price, 75 cents.

It has been the endeavor of the author, in this essay upon micro-organisms, to show that psychological phenomena, being among the very lowest classes of beings, they are met with in every form of life, from the simplest cellule to the most complicated organism. It is they that are the essential phenomena of life, inherent in all protoplasm. He admits the existence of a vitalism, but among the properties of life he classifies psychological phenomena. Undoubtedly the author is materialistic in his views.

MERCK'S INDEX OF FINE CHEMICALS AND DRUGS FOR THE MATERIA MEDICA AND THE ARTS. Comprising a Summary of Whatever Chemical Products are To-day Adjudged as Being Useful in Medicine or Technology. With Average Values and Synonyms Affixed. A Guide for the Physician, Apothecary, Chemist, and Dealer. By E. Merck, Manufacturing Chemist, Darmstadt, Germany. 8vo. Pp. 156. Cloth. New York: E. Merck, 73 William Street. Price, $1.00.

This little work contains a list of drugs, medicines and chemical preparations prepared by the celebrated house of Merck, of Germany. There is found, besides the names of preparations, in proper columns, the approximate prices of the various drugs and chemicals.

We find in this small volume preparations of drugs of which we had never heard before. For instance, take the well-known alkaloid *Morphia*, we find that the house of Merck manufacture, besides the alkaloid, the acetate, arseniate, asparagate, benzoate, bi-meconate, borate, camphorate, citrate, ferro-hydrocynate, formate, hydrobromate, hydrochlorate, hydrocyanate, hydro-iodate, hypo-phosphite, lactate, nitrate, oleate, phosphate, phtalate, saccharinate (not saccharate), bi-saccharinate, salicylate, sulphate, sulphate with strychnine, tannate, tartrate, valerianate, morphine and codeine, morphine and iron oxide.

And in case of very many other drugs and medicines there will be found, what seems to us an "amazing" number of preparations of them, many of which we had never heard and did not know had an existence. About four pages are occupied with the names of the different preparations of mercury manufactured by Merck, with the average price of each one of them. Among them we notice a rhodanide, salicylate, santoninate, stearate, stibiato-sulphide, sub-sulphate, sulphate, sulphide, sulphite, sulpho-cyanate, thio-cynate, thymol-acetate, ureated, mercaptide.

THE PHYSICIANS' LEISURE LIBRARY.—1. The Etiology, Diagnosis, and Therapy of Tuberculosis. By Prof. Dr. H. Von Ziemssen. 12mo. Pp. 120. Paper. Detroit: Geo. S. Davis.

2. THE TREATMENT OF THE MORPHIA HABIT. By Dr. Albrecht Erlenmeyer. Translated by E. P. Hurd, M.D., from the German. 12mo. Pp. 113. Paper. Detroit: Geo. S. Davis.

The *Physicians' Leisure Library*, we have before informed our readers, are issued monthly by the publisher, Mr. George S. Davis, of Detroit—the price being, for volumes bound in paper, like the two numbers whose titles we give above, 25 cents a copy; bound in cloth, 50 cents a copy.

The fact that Dr. Von Ziemssen is the author of the volume on Tuberculosis is an assurance of its great value. In discussing the etiology of the disease, he considers at length the discovery of the bacillus by Koch, and speaks of the great difficulty in explaining how the bacillus can be regarded as the cause of tuberculosis, when it has been demonstrated beyond the possibility of doubt that it is a hereditary affection. The transmission on the side of the father is supposed to take place at the moment of conception, by means of spermatozoa which contain bacilli, for bacilli have been found in the testicles of tuberculous men. Transmission from the mother at the time of conception must presuppose an ovum either originally affected with bacilli or become infected during its passage. There is also the possibility of a later intra-uterine infection of the child by the paternal seed or the maternal blood. But the author regards many of the hypotheses accounting for the *inheritability of tuberculosis* through bacilli, as but desperate efforts at explanation.

There is much valuable information contained in the volume, and it will well repay perusal by every physician.

The work which the publisher has issued on the Morphia Habit is one chapter of the great work of Dr. Albrecht Erlenmeyer, which was published in 1883; a second edition appeared in 1887. This single chapter is devoted to Treatment. The purpose of publishing it is to give a concise and practical presentation of the therapy of morphinism according to Erlenmeyer's teachings.

Editorial.

NOTICE.—We are compelled, on account of want of room, to omit from this issue of the MEDICAL NEWS a number of book notices and editorial articles. Among the latter is an article on Accident Insurance Companies. We will find space, however, for the omitted articles in a future number.

HOW TO OBTAIN A MICROSCOPE EASILY.—Many young physicians are exceedingly anxious to have a good microscope, but can not well afford to spare the money to purchase one. When a young physician sets up in practice, he has so many purchases to make for an outfit that his money is soon exhausted; and, however much he feels that he ought to have a microscope, he is compelled to postpone obtaining one until he has replenished his exchequer from his practice; but it often takes a long time to do that, for new expenses spring up every day.

To afford these young doctors all the assistance in our power, we have made such arrangements by which we can offer to send an excellent microscope—one that will perform all the work for which a medical man needs a microscope—in return for thirty subscribers to the MEDICAL NEWS and sixty dollars. The instrument has two good objectives—one inch and one-fourth inch; one eyepiece; brass tube of usual length with draw-tube; a very delicate fine adjustment; a thin but solid stage, well adapted for oblique light. The tube has the Royal Society screw, so that any American or English objective can be used.

This microscope can not be purchased of the manufacturer for a cent less than $30.00. We will guarantee it to be in good order and to work satisfactorily. A young physician anxious to have an efficient microscope, can easily, we think, obtain thirty subscribers at $2.00 each. Of course they must be new subscribers.

THE HUNTER ANIMALCULES.—As evidence that psychic life originates in microscopic organism, M. Binet draws attention to the fact that prehension of food is preceded by a search for food, and, in the case of living prey, by its capture. He does not investigate these phenomena among all the protozoa, but directs attention especially to the ciliated infusoria. Their habits are a remarkable study. If a drop of water containing infusoria be placed under the microscope, organisms are seen swimming rapidly about and traversing the liquid medium in which they are, in every direction. Their movements are not simple; the infusory guides itself while swimming about; it avoids obstacles; often it undertakes to force them aside; its movements seem designed to effect an end, which, in most instances, is the search for food; it approaches certain particles suspended in the liquid; it feels them with its cilia; it goes away and returns, all the while describing a zigzag course similar to the paths of captive fish in aquariums; this latter comparison naturally occurs to the mind. In short, the act of locomotion, as seen in detached infusoria, exhibits all the marks of voluntary movement.

PRESIDENT DAWSON'S ADDRESS.—W. W. Dawson, M.D., of Cincinnati, was the presiding officer of the sessions of the AMERICAN MEDICAL ASSOCIATION, which met during the present month at Newport, R. I. After an address of welcome by the Governor of Rhode Island, the Hon. Herbert Ladd, President Dawson delivered the Annual Address, which was a most able one, and shows him to be a gentleman of culture, of extensive information, who has added to his knowledge by deep thought.

At the beginning of the address Dr. Dawson quotes an expression from Mr. Gladstone, prompted by a prophecy of a statistician that the English-speaking people, at the close of the next century, would number one thousand millons of people—"What a prospect is that, of many millions of people, certainly among the most manful and energetic in the world, occupying one great continent." "This destiny in numbers," says Dr. D., is startling, "but the assertion of Dr. Dollinger, a German scholar, portrays the culture of the future almost as strikingly when he says that the intellectual primacy of the whole world is certain to fall to the Anglo-Saxon race. Most of that race will be in America."

"It is not an extravagant assertion to say, that in all this turmoil, change, and progress [referring to changes in society, religion, and governments] medicine has kept abreast of the other natural sciences, of politics, and of theology, and has made equal conquest over authority, error and tradition; and it may be added, has contributed largely to man's comfort, happiness and advancement. To demonstrate this, reference need only be made to some of our triumphs—to vaccination, to anesthesia, to sanitation, the prevention of pestilence, the lengthening of human life."

Dr. Dawson says in regard to those who criticise the defects of medical education in this country—"They are, for the most part, gentlemen unacquainted with teaching, without any practical knowledge of the constitution of medical colleges, or of the toil, devotion and sacrifice made necessary by those engaged in didactic and clinical instruction. They deliver their censorious addresses to a body of professional gentlemen, the peers of any, some of whom have grown gray in the hard service; others are still in the prime of life, with reputations co-extensive with civilization. The rest are young, full of life and enthusiasm, fired with ambition to render loyal service to that profession which they have chosen. Can our system be so defective? The pessimistic orator seems to forget that he is the product of the system of medical education which he is so severely condemning. Some one has said, 'By retrospection and introspection an individual, like a profession, may be benefited.' In this self-examination we should have but one motive, the elimination of error, the development and support of truth."

In regard to American medical colleges the Doctor said: "For many years (and even now), with few exceptions, medical colleges were the creation of the members of the profession, most often of the faculties composing the schools, without endowment—indeed, it may be said that almost everything on this continent is endowed, except medical colleges—without governmental aid, depending for their support upon the sacrifice of time and money on the part of the gentlemen occupying the chairs. Yes, not only without patronage from the government, but society, from some unknown cause, has ever been against legitimate medicine, depending upon the scientific physician in time of trouble, yet in the interim openly supporting all sorts of shams, frauds and imposters. Elsewhere, college work is provided for by the state; especially laboratory investigations—the nature and the genesis of disease. Hence it is not strange that in such departments we may not be so far advanced as our European brethren, but while they have been engaged in experimental studies we have developed the practical. Everywhere is seen among us an earnest, a burning desire for higher culture, for more exact and accurate knowledge. Especially is this true of our younger members and of those just entering the profession."

As regards the facilities which exist in this country for fitting young men to enter upon the study of medicine, Dr. Dawson calls attention to the fact that, by the last census, it was shown that nearly four thousand institutions—schools for higher learning—existed in the United States, and that nearly four hundred of them ranked as colleges and universities. In these are massed, yearly, nearly sixty thousand pupils. They, together with two hundred thousand common or primary schools, in the higher grades of which the curriculum nears that of many colleges at home and abroad a third of a century ago, may be looked to supply, year after year, a better material from which medical students will be taken. The Doctor mentioned how hopefully Prof. Chas. W. Eliot painted our future when he spoke of the 8,000,000 children in elementary schools, 250,000 in secondary schools, 60,000 in colleges, with 360,000 teachers to train and develop them.

Dr. Dawson says that during the summer of 1888 he witnessed the beginning of a university in California, which in scope and equipment will surpass, probably, any school upon the continent. Should Gov. Stanford live to develop his conceptions, that far-off State will have an institution of which not only the Pacific Coast, but our entire country, yes, all civilization, will feel justly proud. It will be so liberally endowed that it will command the best abilities of the world.

Dr. Dawson takes the same view in regard to the necessity of a classical education for those purposing to study medicine that we have advocated for years. He says: "And here, you will allow me to say, we can not insist too strongly upon the necessity of classical education; without it the medical man must ever be at a disadvantage. Without a knowledge of Latin and Greek sure and distinguished success is uncertain. The student may neglect algebra and the higher mathematics, but let him, by all means, have a liberal knowledge of languages. At the commencement of one of our Western schools, 'forty per cent. of the graduating class had been admitted on diplomas from literary or scientific colleges; the balance of the class had received from one to five years of academic or collegiate instruction.' This college is without endowment—depending entirely upon the learning, devotion and sacrifice of the faculty."

A classical education imparts a discipline and culture to the mind which a mere scientific training fails to do. Some are disposed to think that the study of mathematics will develop the reasoning powers more than the study of Latin and Greek. May be for some kinds of ratiocination mathematical studies will better develop the mind, but not for that sort which qualifies for the practice of medicine. Those persons are always found to be the best physicians whose mental training has been with reference to imparting intellectual culture and refinement, and this is best done by the study of the classics. That is not the most desirable physical training which develops only muscular power, but which, besides strength, imparts endurance, quickness of movement, grace, etc. A person whose physical system had thus been trained would soon overcome in a pugilistic encounter him whose bodily exercise had been limited to lifting heavy weights, though he manifested a muscular strength as great as that of Hercules or Sampson.

Latin and Greek are well termed the *learned languages.* Far more it is true with them than with any of the modern languages, that the acquisition of them constitutes learning. Or we will modify the expression by saying that, having acquired a knowledge of them, the intellectual faculties are better developed for gaining knowledge by study—as a knowledge of medicine, law, theology, natural sciences, etc. —than if, instead of their acquisition, some of the modern languages had been substituted. They are the mothers of the European languages of to-day. They have a *scientific* structure that is peculiar to them. The study of their contruction and idioms not only educates, but constitutes knowledge. The English student who learns Latin, gains an insight into his own language that would be impossible for him otherwise to obtain.

Dr. Dawson, in speaking of American medical colleges, quotes Dr. Senn, who, about a year ago, wrote as follows: "There is no question in my mind that the average American student learns more in one month than the average German student in three. He learns more, not because he has better teachers or better facilities, but he makes better use of his time. I am satisfied that in our last graduating class I had at least a dozen students who, after studying three years, would pass a brilliant examination in any English or German university. They would have felt at home even in a dress coat in Volkman's clinic, passing their final examination."

We read Dr. Senn's paper, and we remember that he ascribed the difference in the proficiency of American and German students to the fact that American students, while in attendance upon medical lectures, were stimulated to hard study by daily examinations before the whole class by each one of the professors, while German students were subject to no examinations during their whole seven years of study until they came to be examined for their degrees at the end of their course of instruction. The result was, having no fears of disgraceful failure, from examination, they spent their evenings at places of amusement or in dissipation.

Dr. Dawson very correctly stated that it was no longer necessary for students to go abroad to seek instruction in any department of medicine. Every facility can be had in this country. For the study of pathogenic micro-organisms there are no better laboratories in the world than those of Prof. Welsh in Baltimore and the Hoagland Laboratory in Brooklyn. But besides these there are ample provisions for the study of pathogenic micro-organisms in most of the leading medical colleges of this country—in New York, Philadelphia, Boston, Baltimore, Cincinnati and the cities of the West and South generally.

Prof. Welch's laboratory is in connection with the Johns Hopkins University. The distinguished army surgeon, George M. Sternberg, is the director of the Hoagland Laboratory founded by Dr. C. W. Hoagland. The latter has been built and equipped in the most complete manner for research work in bacteriology and experimental pathology.

Under the head of "Clouds" the President spoke as follows in regard to certain remedies now used by many physicians: "These remedies with 'patent processes' are in daily use. This is one of the dark spots in the picture. It came in with the 'legally qualified practitioner.' What is antipyrin, antifebrin, salol, sulfonal? The reliant patient may well propound such questions. Who can answer them? Are we relegated at one fell move back into outer darkness, the associates of venders of 'secret remedies,' 'of patented processes'? What higher is a 'patented process' than a 'patented nostrum'? The profession was never so low as to countenance the latter; but have we not, in these latter days, become propagandists of patented, and therefore secret processes?"

We are able to say for ourself that we have never yet made a prescription for antipyrin, antifebrin, salol, or sulphonal, and we do not believe that thereby we have committed a wrong against one of our patients. Are there not remedies which have long been in use, which, if properly employed, will fulfill every indication fulfilled by them, or even better. We think so. Further, we believe that the time is not far distant when they will be entirely discarded.

Though it would seem that we had given quite a lengthy outline of President Dawson's Address, yet there are many subjects pertaining to medicine in general, and to American medicine, which he discussed, to which we have not space to refer. It was an excellent address, which will compare favorably with any of the Annual Addresses of the past. Dr. Dawson by his address not only did credit to himself, but to the profession of his city.

A PHYSICIAN DESERTS PHYSIC FOR PHILOLOGY.—Dr. Christopher Johnston, Jr., after several years of practice, has announced his decision to leave medicine and devote his time to philology. During his course at the University of Virginia, Dr. Johnston excelled especially in the ancient languages, and was one of the few men who left that center of learning with the degree of A. M. In the wish to follow in the footsteps of his illustrious father, he graduated in medicine at the University of Maryland, and has practiced here for several years, but during all this time he has always given a great deal of time to languages, and in the past few years he has devoted much attention to philology, especially to Greek and Hebrew. He carried his studies to such a point that the Johns Hopkins University honored him with the position of Fellow in the Semitic Languages. During the past few years, Dr. Johnston has contributed to the literature of this department. He has written a "Biographical Sketch of Sir Henry Rawlinson, the English Assyrian Discoverer," which was published in the Johns Hopkins University Circular for March, 1889. Also at a late meeting of the American Oriental Society held at Boston, he read a paper on "Chaldean Astronomy." As his appointment at the Hopkins dates from October 1st, 1889, Dr. Johnston will continue the practice of medicine until that date. He has, however, resigned his position as Chief of the Eye and Ear Clinic at the University Dispensary. It is seldom that a medical man attains such eminence in this department of philology. Dr. Johnston, in the beginning of his new work, will pay especial attention to Assyriology. If it did not sound too much like an obituary notice, it might be added that his friends in the medical profession, and particularly his many friends among the younger men, will miss him, although they may console themselves with the fact that he goes into this new work with his whole heart.—*Maryland Med. Jour.*

HOW TO LOOK FOR TUBERCLE BACILLI IN SPUTUM.—We copy the following directions from Ziemssen: "Press a little of the suspected sputum between two cover-glasses so as get a very thin layer. Dry the cover-glasses separately, either by moving them through the air or holding over a flame, or by passing a few times through the flame. This fixes and dries the preparation. Place some drops of aniline oil in a reagent glass half filled with water; shake, and filter into a watch-glass. Add several drops of fuchsin or methyl violet to the contents of the watch-glass till they are markedly colored. Warm this mixture till it begins to smoke. Place the cover-glass with the dried sputum, face downward, on the warm liquid, and let it float for from three to five minutes. Remove and rinse in alcohol, acidulated with nitric or hydrochloric acid, until very slight traces of color remain; then rinse in ordinary alcohol (70 or 80 per cent.). Dry the cover-glass as before by holding above a flame, clean it when necessary, add a little pure glycerine, and set under the microscope. An enlargement of four hundred diameters will show the bacilli if present.

SPINAL IRRITATION.—A recent number of the *Alienist and Neurologist* has an interesting article on this affection by Dr. J. T. Eskridge, of Denver. The Doctor is of the opinion that *clean-cut* cases of spinal irritation due to anemia, as supposed by Hammond, are less numerous than those complicated by symptoms of a mixed condition.

Spinal irritation is the cause of very many obscure symptoms which often puzzle a physician very much. With some it causes symptoms of indigestion, in others neuralgic pains in various parts of the body; others affected with it will complain of a dry, harsh cough, with a feeling of constriction about the chest, and yet an examination of the lungs will not disclose any lesion. Vertigo is a frequent symptom, especially when in the erect position and walking. As stated by Dr. Radcliffe, cardiac distress is frequently complained of—palpitation, vascular throbbing, flushes and epigastric pulsations. Aphonia has been met with frequently by some physicians, but we have never met with a single case, and Dr. Eskridge says that, so far, he has met with only one case in which the loss of voice was associated with an irritable spine.

Dr. Eskridge is of the opinion that hysteria plays an important part in spinal irritation. That hysteria is frequently present in cases of it in females there is no doubt; and they undoubtedly constitute a large majority of the cases; but spinal irritation is not unfrequently observed in men, who generally are not subject to hysteria, though such is sometimes the case. But we have had patients of the male sex who had no symptoms of hysteria whatever. We, therefore, differ with Dr. Eskridge in his belief that hysteria frequently acts as a cause. While it often attends upon the affection in females, yet we are of the opinion that it is only an accompaniment—the cause which brought about the spinal irritation producing also the hysteria; or, may be, the spinal irritation causing the hysteria as it causes vertigo, symptoms of indigestion, etc.

Spinal tenderness, while it is not always a prominent symptom of spinal irritation, says Dr. Eskridge, yet it appears to be almost invariably present when properly sought for. In fact, it is our opinion that it is always present. He quotes Radcliffe, who says that it is a pathognomonic symptom, and Hammond, who says that it is a constant symptom, never regarding a case as one of spinal irritation unless spinal tenderness is found. The Griffin brothers, he states, found it present in one hundred and forty-three of one hundred and forty-eight cases, and Flint in fifty-three of fifty-eight cases. The tenderness, he continues, is not always complained of, and the patient's attention may be first attracted to it while the spine is being carefully examined to determine the cause of some obscure nervous symptoms. We have frequently found the back very tender just outside the vertebral column on both sides, when, according to the testimony of the patient, tenderness had not been suspected previous to our applying pressure. The tenderness, as the Doctor says, is rarely limited to one spine; but, as a rule, several spines are tender, and in some cases the tenderness extends throughout the entire spinal column. The dorsal region is the most frequent seat of tenderness, the cervical the second, and the lumbar the least.

Radcliffe is quoted as saying that "the pain in the back may be brought on or exaggerated by lifting, twisting or straining the back in any way, or by mental effort." In some cases, says Dr. Eskridge, strong pressure is required to develop the pain, and in others the slightest touch is complained of. Radcliffe says that the pain in some cases is as if a nail were driven into the part, in others as if a hard ball were in the part, while in a third the pain is of a neuralgic character.

We will quote, at length, the remarks of Dr. Eskridge on the nature of spinal irritation: "Post-mortem examinations have thrown no light upon the pathology of this disease. It is essentially a functional disease, so far as our present knowledge of it goes. That it is a perverted function of the parts, due to irritation from some cause, the symptoms seem to indicate. The affection to me is always indicative of a lowered condition of the general health; is found in the majority of instances in women, usually associated with a nervous, irritable temperament, and not unfrequently with hysteria. It seems to me that spinal irritation is frequently a local manifestation of the condition known as neurasthenia, and that it may have, as the cause of the local symptoms, spinal anemia, or irritation of the sympathetic ganglia, or membranes of the cord. In some instances it appears to be a neuralgic condition depending upon the lowered state of the general health. The disease does not always denote too little blood in the parts affected, but an abnormal condition of the spinal circulation, giving rise to imperfect nutrition and perverted function. It is probable that local anemias and states of engorgement of the blood-vessels, especially the veins, may exist at the same time in the cord and the surrounding structures. I desire to emphasize what I have already indirectly expressed, that I do not believe spinal irritation is a separate and distinct disease, but a complexus of symptoms resulting from an abnormal condition and perverted function of the spinal cord, its membranes, or the sympathetic ganglia controlling the spinal circulation, produced by injuries to the spine, or a lowered condition of the general health from various causes."

While we assent to some of the Doctor's views, expressed in this lengthy quotation, in regard to the nature of spinal irritation, we must dissent from some of them.

Some of the most eminent writers, he says, ignore it as a separate and distinct disease, regarding it merely as the first stage of myelitis. If it should be dropped from the list of diseases, so also should a number of affections which have place on the list. Among them we might mention hysteria, tetanus, chorea, etc.

THE
CINCINNATI MEDICAL NEWS.

VOL. XXII. No. 259. Old Series. | JULY, 1889. | VOL. XVIII. No. 7 New Series.

Original Contributions.

Scarlatinous Otitis.

BY CHAS. H. MAY, M.D.,
VISITING OPHTHALMIC AND AURAL SURGEON, RANDALL'S ISLAND HOSPITAL; INSTRUCTOR IN OPHTHALMOLOGY, VANDERBILT CLINIC, COLLEGE OF PHYS. AND SURG., N. Y., ETC.

Read before the Pediatric Section of the New York Academy of Medicine, March 14th, 1889.

WERE any excuse necessary for the presentation of the paper which I have the honor of having been asked to read this evening, it could be found in the large number of cases of impairment of hearing and of total deafness resulting from scarlatina, and in the fact that the dangerous opinion crediting scarlatinous otitis with being able to take care of itself and needing no treatment is quite prevalent. Some remarks on this subject seem quite opportune, now that a great many cases of scarlatina are being reported.

Though ear effections as complications or sequelæ of scarlatina are known to be quite common, I have been able to find but one author who gives expression to this frequency in figures: Burckhardt-Merian quotes Baader, who observed this frequency in two epidemics of the diseases; in one 33 per cent., in the other 22 per cent. of all cases presented otitis as a complication or as a sequel to scarlatina.

Much more statistical evidence is at hand to show in what a large percentage of the cases which present themselves with ear effections, scarlatina has been responsible for the aural trouble. Thus Schmalz reports 2,500 cases of ear affections, of which 137 were due to scarlatina (5½ per cent.). Jearsley found 26 cases due to scarlatina among 544 examined (almost 5 per cent.). Burckhardt-Merian, among 1,950 cases of ear disease, found 85 due to scarlatina (4⅓ per cent.). About 5 per cent., therefore, of all aural affections appear to be the result of scarlatina.

When we come to examine the nature and extent of these ear effections due to scarlatina, we find that not only are they numerous, but the percentage of serious cases in which marked impairment of hearing, or even total deafness, is present is a large one. Burckhardt-Merian found entire destruction of the membrana tympani in 34 per cent. of cases of scarlatinal otitis; and as an additional illustration of the serious effects of otitis after scarlatina, when left to itself, the following brief resume may be of interest: Bezold reports 185 cases in which these effects after scarlatina were carefully observed:

Of these 185 cases, in 30 the entire membrana tympani was destroyed, with loss of one or more bones; in 59, the perforation comprised two-thirds or more of the membrana tympani; in 13, there were smaller perforations; 44 cases were complicated with granulations and polypi.

As regards the effects upon the function of hearing in these same 185 cases:

In 15, hearing totally destroyed (in 6, on both sides).

In 77, hearing distance for low voice less than half a metre.

In 25, hearing distance for low voice between one half and two metres.

In 14, hearing distance for low voice above two metres.

But the most impressive idea of the alarming effects of scarlatinous otitis upon hearing may be gathered from the following table, which has been taken from the monograph of Burckhardt-Merian already alluded to, and to which additions have made. In its modified form, this table represents reports from deaf-mute institutions of many different countries:

REPORTED BY	Total Number of Cases of Deaf-mutes.	Number of Cases Resulting from Scarlatina.	Percentage.
Toynbee	8	36	36.73
Sauveur	1,892	216	11.41
Wilde—Irish census	503	35	6.96
Wilde—American report	787	44	5.59
Blake and Shaw	18	4	22.22
Arnold	144	13	9.02
Burckhardt-Merian	35	3	8.56
Hartmann	1,989	205	10.30
Roosa	147	16	10.88
Total	5,613	572	10.18

Thus 10 per cent. of deaf-mutes owe their affliction to the effects of scarlatina. The study of these figures should certainly result in diminishing the tendency on the part of the general practitioner to do nothing in the way of treatment in cases of scarlatinal otitis. There was a time, many years ago, when the discharge of scarlatinal otitis was looked upon with feelings of satisfaction and regarded as a favorable means of ridding the system of the scarlatinal virus; but the days of such erroneous pathological ideas are past; the reason for inactivity in the treatment of scarlatinal otitis by the general practitioner probably is that he regards the achievements of otology as doubtful and unsatisfactory. Though this may be the case in some affections of the ear, in the group of cases comprised under the title of this paper, aural therapeutics are capable of producing the most happy results; and there is no doubt that the active treatment of these cases by the general practitioner, during the course of scarlatina, would do much to diminish the large percentage who owe a serious defect in hearing, or total deafness, to the effects of this disease. We should also remember that no patient is safe who suffers from chronic purulent otitis media; for we can never be certain when the disease will extend to neighboring parts, and when a serious or fatal result, such as meningitis or cerebral abscess, will ensue.

The symptoms which we get in scarlatinal otitis do not differ from those which we find in otitis occurring under other circumstances; they are apt to be severe and well marked. Usually the otitis does not occur until after the scarlatina has lasted several days, very often during the commencement of desquamation. We then often find the complication ushered in by chills; in very young children there may be convulsions; there is rapid elevation of temperature, often rising to 104° or 105°, with a corresponding increase in the frequency of the pulse and of breathing. There is great pain, at first paroxysmal and confined to the ear, but soon becoming of a steady neuralgic character and radiating in various directions from the ear, following branches of the fifth nerve; the pain is regularly worse at night. There is tenderness which may be confined to the region around the tragus, but often extends and involves the mastoid region, even in cases in which mastoiditis does not occur. Deafness is nearly always well marked and develops rapidly; both ears are affected in the great majority of cases, though in a few the affection is unilateral. There is great restlessness; then the patient becomes quite stupid, and often, if there is no interference giving relief, symptoms indicating meningeal irritation, and even those of blood-poisoning, show themselves. There is usually swelling of the cervical, auricular and submaxillary glands, and this swelling may precede the invasion of the otitis, or may have been present as the result of the scarlatina.

After lasting two or three days, these symptoms are usually relieved, even when no paracentesis is done, by spontaneous rupture of the membrana tympani; and following this there is a gradual diminution in the intensity of the symptoms, and they may cease entirely; or with the closure of the opening in the membrana tympani they may again become severe.

The diagnosis, though usually quite easy and apparent, is sometimes less evident. This may be the case in very young children who do not complain of the pain, and who give us no local symptoms referable to the ear, except perhaps occasionally to put the hand to this organ. In such patients, when, whilst the symptoms of the scarlatina are on the decline, there is an increase in temperature, restlessness, and other symptoms of irritation for which we can find no cause, the ears should always be examined; such young children often press the ear affected into the pillow, and in this way give us a guide to the part causing the exacerbation of symptoms. It is a singular fact that pain is not always complained of, even in children old enough to express their ailings, and in this way the aural complications may be overlooked until meningitic or pyemic symptoms have arisen. I have myself observed such a case, in which, though on the alert for ear complications, a purulent otitis occurring during the desquamative stage of an attack of scarlatina in a child was overlooked until compelled to find a cause for rapidly developing stupor, chills followed by fever and profuse perspiration, and other symptoms indicating a probable absorption of septic material by the blood; paracentesis of both membranæ tympani in this case was followed by immediate improvement.

The title "Scarlatinous Otitis" includes all the ear affections which may occur as complications or as sequelæ of scarlatina; in the great majority of cases they are examples of otitis media, catarrhal, purulent, and diphtheritic; but extension to the mastoid process and to the labyrinth also occurs, though fortunately in only a minority of cases. It is probable that in all cases of scarlatina congestion of the mucous membrane of the tympanum takes place; this may give rise to no subjective symptoms, and is probably devoid of consequences. In the milder cases, catarrhal inflammation exists, and the symptoms of this may be slight, and the complication may subside with little or no treatment after the angina, of which this is but an extension, disappears.

Though some cases of catarrhal otitis media give rise to marked symptoms, it is generally the purulent and diphtheritic varieties of the inflammation which furnish the cases of pronounced scarlatinous otitis. In these cases there is now no longer any doubt that the complication arises through a direct extension of the throat lesion through the Eustachian tubes into the middle ear; the theory of metastasis which was formerly held is now no longer tenable; direct extension of the pharyngitis accompanying scarlatina has been proven to be the mode of occurrence by numerous post-mortem sections.

It is now generally believed that the severer forms of scarlatinous otitis are due to a diphtheritic otitis media, and this even in cases in which diphtheritic patches can not be observed in the throat; it is certain that those cases of scarlatina which are complicated by diphtheria are most likely to be affected with severe forms of otitis media—varieties which are remarkable for their malignant character, so to speak. Thus it is noticed in the severe forms of scarlatinous otitis, that a very rapid and extensive destruction of tissue takes place, more rapidly and more extensively than can be explained by maceration of the membrana tympani by the products of inflammation, and by pressure of the latter and the incarcerated secretions; for these conditions of maceration and pressure also exist in ordinary cases of otitis media purulenta, and yet such a rapid destruction of membrana tympani and loss of ossicles is not seen. Furthermore, even after spontaneous perforation, or after paracentesis, this peculiarly active destructive process continues; often in several weeks entire absence of membrana tympani and the escape of one or more ossicles are noted. Burckhardt-Merian found entire loss of membrana tympani in thirty-four per cent. of cases of scarlatinous otitis which had not been specially treated. This same necrotic tendency is seen in cases of primary diphtheria of the middle ear—the existence of this can scarcely be doubted now. On the other hand, it is somewhat peculiar that though aural complications of diphtheria are not infrequent, they are generally of the catarrhal and purulent types, and are rarely diphtheritic.

It is easy to account for the occurrence of diphtheritic otitis in cases in which scarlatina is complicated by pharyngeal diphtheria; for, besides direct extension, each act of swallowing causes some of the infected air of the nasopharynx to be forced into the middle ear; in these diphtheritic cases, after perforation, shreds of false membrane will be found adhering to the walls of the tympanum; these are difficult to tear off, and are accompanied by a little secretion of a sero-purulent nature and often quite offensive.

Though such serious consequences result from scarlatinous otitis, the prognosis is certainly largely influenced by treatment. This is one of the redeeming features of otology. Without treatment the effects of the severer forms of scarlatinous otitis are very disastrous to the function of hearing; with treatment, it has been shown the results are very favorable. The very mild cases in which the inflammation is of a catarrhal type often do well, and recover perfectly without any treatment. In cases in which the internal ear is affected, the consequent impairment of hearing is thought to be produced by the deposit and pressure of inflammatory products upon the ends of the auditory nerve; in these cases, numerous examples are reported in which the deafness has been unexpectedly recovered from in the course of two or three months, and sometimes even without any treatment whatever; in such instances it seems plausible to suppose this improvement to be due to absorption of deposited inflammatory products.

In regard to treatment, there are simple and effective means which can be used by the general practitioner, which will suffice to cure the complication in mild cases, reduce the severity and diminish the disastrous effects upon hearing in the more serious forms. At first all forms may be treated alike. With the occurrence of pain, tenderness, deafness, and other symptoms indicating an extension of inflammation to the middle ear, a long, narrow ice-bag should be applied so as to cover the region immediately behind the auricle, and curving around the lower end of this organ upon the temporo-maxillary region; if a layer of flannel be interposed between the auricle and ice-bag, these applications are not, as a rule, disagreeable, and are very often effective. Tincture of iodine often acts well, painted over the skin immediately behind the auricle.

In some cases these applications of cold are not borne well; then we should use hot applications, covering the entire auricle with cloths wrung out of very hot water; over these we place a large wad of cotton covering the entire side of the head and a layer of oiled silk on the outside; in this way the heat is most effectively applied.

Whether hot or cold applications are made use of, we must endeavor to control the pain, which in many cases is quite intense and is apt to be pronounced at night. The best manner of accomplishing this is to instill hot salt water (ʒ i. to Oi.) into the ear, allowing it to enter the external auditory canal from a fountain syringe held not more than a foot above the level of the ear; or it may be poured in by a teaspoon or a medicine dropper; a little tincture of opium or cocaine may be added to the salt water, but these do not materially increase the anodyne properties of these applications in which warmth is the chief agent in relief.

Large doses of antipyrin are also useful in controlling the pain, and if these do not answer, an opiate should be given; for it is essential that the patient be relieved from pain and restlessness. Rest is an exceedingly important factor in all these cases, and must be insisted upon, if this has not already been done in the treatment of the scarlatina. It must be absolute rest in bed.

Another simple and valuable method of giving relief in these cases is local blood-letting. Two leeches may be applied just behind the ear, if there be any tenderness over the mastoid region, or at the anterior limits of the tragus, care being taken to prevent entrance of the leeches into the auditory canal by filling this with cotton. The artificial leech of Heurteloup may also be used over the region in front of the tragus, its application behind the auricle being difficult on account of the unevenness of surface existing in this situation.

In very mild cases, where there is but congestion or a mild form of catarrhal inflammation, these simple means will suffice, and be followed by a disappearance of all symptoms referable to the ear. But if, in more severe cases, the symptoms do not disappear, examination of the membrana tympani will probably show intense congestion or a bulging of this membrane, and paracentesis is then absolutely indicated. It is not desirable to wait until a large collection of secretion in the middle ear gives us a classical picture of a bulging drum membrane projecting into the auditory canal, and presenting a marked yellowish reflex indicative of the existence of pus within; such classical pictures are not common under the circumstances, for the pain, tenderness, swelling of the canal and the difficulty of making a thorough examination often compel us to be satisfied with but a hasty glance through the speculum. Paracentesis is indicated in all these cases, even where there is no physical evidence of anything but congestion of the drum membrane; the results of this operation are almost always immediate and gratifying, whether pus has been evacuated or whether the incision has merely allowed the escape of sero-mucus, or of only a small amount of blood.

In such cases the early performance of paracentesis can not be urged too strongly; some mild cases may get well without it, but even in these cases the incision can never be called a mistake; for did it accomplish nothing more than the immediate relief of pain, it would still be entitled to be regarded as a valuable resource. If the auditory canal be kept clean, this small operation never does any harm; the wound in the membrane has a pronounced tendency to heal rapidly, and this often before such closure is desirable.

After paracentesis, if nothing but blood or serum or sero-mucus issue from the opening, the case may be left to itself, a little cotton being kept in the auditory canal so as to absorb the discharge. The cotton should be loosely applied. The patient should lie with the affected ear upon the pillow, if the trouble be unilateral. Even if the paracentesis has resulted in evacuating pus, the case very frequently needs no further treatment; the cotton, loosely applied in the canal, should be changed frequently; after several days the discharge, gradually lessening, may cease entirely; the opening in the drum-membrane heals perfectly, and the patient hears as well as ever.

But supposing, in a case in which paracentesis has been performed and pus has been evacuated, there are evidences that the discharge does not escape freely, as shown by attacks of pain and by a commencing offensive odor of the material from the middle ear; then it will be necessary to empty the middle ear completely once a day by pressure from behind, and to cleanse the auditory canal several times a day. The middle ear is emptied by inflation with Politzer's bag or with the Eustachian catheter; the catheter is preferable, becaue there is no danger of forcing offensive material from the nose and naso-pharynx into the Eustachian tube and thence into the middle ear; but it can rarely be used in children under four years, and even in older children its successful application seems to depend upon the skill of the practitioner—not infrequently the child will not permit its use even in the hands of the most experienced aurist. On this account the Politzer bag must be resorted to in a great many cases, the child being asked to swallow water, or in very young children being made to scream as a means of causing closure of the palate, and thus compelling the air to enter the Eustachian tube. Previous to Politzerization, it is well to wash out the nose and naso-pharynx; this can readily be done without any risk of exciting additional aural trouble, by using an ordinary straight-pointed medicine dropper; the latter is filled with warm salt solution (ʒi. to Oi. water) and introduced into each nostril about half an inch in a horizontal direction; the bulb being compressed, the fluid passes through the nasal cavity and naso-pharynx, and escapes from the other nostril or from the mouth; this is an easy, safe and effective manner of cleansing the nose and naso-pharynx, and I have never seen any injurious effects from its employment.

In those cases in which there is a tendency for the discharge to become offensive, or in which it is very profuse, it is necessary to keep the auditory canal clean. The very best solution for this purpose is an aqueous solution of salt—a teaspoonful of table salt to a pint of water; this should always be used warm. It is difficult to see why there should be any prejudice against washing out the canal in these cases, except that it may owe its origin to the fact that pure water is irritating if there be an opening in the drum-membrane, just as pure water is irritating to any mucous surface. But salt water of the indicated strength (¾ of 1 per cent.) is devoid of irritation, is cleansing, bland and soothing. It is, of course, no disinfectant, but neither are boric acid in powder nor boric acid nor borax in solution; true disinfectant solutions are too irritating in this stage. The salt solution may be used either by fountain syringe (not held too high, so that the force be not too great,) or the ordinary syringe, used gently, undue pressure being injurious, and care being taken not to injure drum or canal by the nozzle of the syringe.

Often this treatment will be all that will be required; the opening in the drum-membrane, whether spontaneous or made by paracentesis, will heal after the secretion of pus has ceased. Packing the auditory canal with powdered boric acid in such a manner as to prevent the escape of pus is not only an irrational, but a dangerous proceeding, and may cause extension of the inflammation to deeper parts of the auditory apparatus; if the pulverized boric acid be blown in in quantities insufficient to cause a barrier to the escape of secretions, and the canal be washed out each time before the insufflation is repeated, no such objection can be urged against the boric acid treatment. The fact that after paracentesis these simple cases do well when kept clean, whether treated by insufflations of boric acid or where nothing but salt water is used, may explain why good results are reported after use of a great many different bland remedies; and these simple cases certainly do as well without as with boric acid insufflations.

Should a repetition of symptoms and an examination of the drum-membrane show that the edges of the incision have united, it is necessary to reopen the wound, or to repeat the operation of incising.

In performing paracentesis of the drum-membrane, it is customary to use a narrow knife resembling a lance-shape-pointed needle, and this is supported upon an obtuse-angled shaft; the speculum being introduced and a good light thrown in from the forehead mirror, an incision is made in the postero-inferior quadrant, or it may be made in any part of the posterior half of the membrane; the postero-inferior quadrant is usually selected because the tympanum is deeper here, and the opening is made in a part of the drum-membrane favorable for the escape of secretion. Any narrow knife, such as the Graefe cataract knife or a very narrow bistoury, will answer for this operation. The mistake usually made by those who do not perform the operation frequently is to make the opening too small; it can scarcely be made too large, and should be free and extensive, running from behind downward and forward. The operation is painful, but is only of momentary duration; the most efficient way of reducing the amount of pain is to have the instrument employed very sharp, and to do the operation rapidly. Cocaine has some effect, but certainly not much in anesthetizing the part; and this does not seem surprising, when we remember that we are really dealing with a cutaneous surface.

It is not until all acute symptoms have subsided that it is proper to use astringents for the cure of any remaining otorrhea.

Where there are marked swelling and tenderness over the mastoid region—and these are not relieved by a paracentesis of the drum-membrane—it is proper to make Wilde's incision—an incision one or two inches long, extending in a curved direction corresponding to the posterior attached margin of the auricle, and from two fifths to three-fifths of an inch behind this down to the bone.

My experience in the treatment of those severe and rapidly destructive cases of scarlatinous otitis in which the inflammation is frequently of a diphtheritic type has been rather limited, and therefore I prefer to give a brief résumé of the treatment recommended by Burckhardt-Merian, who is considered quite an authority in these cases. He advises the cauterization of the diphtheritic patches through the opening in the membrana tympani with a ten per cent. solution of salicylic acid in alcohol; this he applies upon cotton at the end of a delicate cotton-holder, and such applications are made first twice a day, and then once daily; if patches are seen in the naso-pharynx these are also cauterized. The applications are painful, and this, as well as the tendency to vomit when the applications are made, is controlled by allowing the patient to suck small pieces of ice. The polypus snare and the aural curette are used to remove as much as possible of the diphtheritic membrane from the tympanum. The auditory canal is syringed several times a day with a solution of salicylic acid made in the proportion of one or two teaspoonfuls of a ten-per cent. alcoholic solution to one hundred grams of water. A solution twice this strength is used for gargling. The nose is cleansed by the douche, first with salt water (three-fourths of one per cent.), and gradually salicylic acid is added to this salt water in the proportion of two or three tablespoonfuls of this ten-per cent. alcoholic solution to one litre of salt solution. Sometimes he employs salicylic acid insufflations in the place of applications of the ten-per cent solution. Other authorities have recommended filling the auditory canal with lime water several times a day, with a view to dissolving the diphtheritic membrane.

Where the nervous apparatus of the auditory organ has become involved as a result of scarlatina, our means of limiting this result are meagre, if we have any at all. Pilocarpine has been employed rather extensively for this purpose, daily hypodermic injections of one-twelfth to one-sixth grain being used for four or six weeks. The reports of the efficacy of this treatment are conflicting. Politzer, who first recommended the drug, is inclined to abandon it now; Rosengarten recently reported many favorable results, as did also Wolf in two cases of scarlatinous otitis affecting the labyrinth. Its employment seems rational, for with increased exudation into the various parts of the auditory apparatus, the absorption of inflammatory exudations would seem to be favored, thus relieving pressure upon nervous tissue and facilitating easy motion in the joints between the ossicles of the ear. I have not employed this remedy in a sufficient number of cases (not more than ten cases), but in this limited number the results were rather doubtful and altogether rather unsatisfactory. It is a fortunate fact that in many such cases in which the remedy seems indicated, marked improvement in hearing not infrequently occurs after two or three months even when nothing is done, so that the prognosis in these cases is indefinite.

In conclusion, I would call attention to an unexplored field of observation which would be the means of giving information having an important bearing on our knowledge of scarlatinous otitis, and one which lies within the province of the general practitioner and is inaccessible to the aurist: To what extent is the frequency of scarlatinous otitis, and to what degree is its severity influenced by the treatment of scarlatina, and especially by the treatment, both general and local, of those cases of scarlatina which are complicated by diphtheria?

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

THE SYSTEMATIC TREATMENT OF DIPHTHERIA AND DIPHTHERITIC ANGINA.

BY JULES SIMON, PHYSICIAN TO THE CHILDREN'S HOSPITAL.

THE treatment of diphtheria comprehends two distinct divisions—(*a*) a prophylactic treatment, (*b*) a treatment properly so called.

From the prophylactic point of view, the recognition of the pathogenic bacillus, the knowledge of its mode of development on the mucous membrane, its evolution, its grand and long vitality, brings new supports to the results given by clinical observation and confirms the latter.

You can not therefore attach too much importance to all that concerns the hygiene of children; avoid the causes of taking cold, the pretexts for epithelial exfoliation of the mucous membrane of the fauces and nasal fossa, close as it were the passages of inoculation of the elements of contagion—these are the principal indications for the prophylaxis, which are completed by isolation and the antisepsis of the contaminated places and clothes.

It is the same from the therapeutic standpoint; numerous medications have been devised a priori, and the greater number very justly abandoned; mercury, chlorate of potass. in high doses, the bicarbonate of soda, etc. All, in advising similar remedies, had the object in view of acting on the blood by the aid of dissolvents, alkalies, etc. The results have not come up to their expectations, and if one were tempted to make new trials of this character, it is only necessary to remember that the blood does not hold the bacillus of diphtheria, that it is therefore useless to attempt to combat an absent enemy. The diphtheritic poison contained in the blood and the viscera is the cause of the infection. We must therefore do nothing that can augment its powers by administering debilitating remedies; on the contrary, we must endeavor to increase the powers of resistance of the organism by the aid of tonics and diffusible stimulants.

Opium, purgatives, repeated emetics, leeches and blisters should therefore be totally prohibited.

The *local treatment* which I advise you to employ must be the more energetic, because we know that the malady, before becoming general, is at first a local one. By destroying in its place the infectious agent, by preventing its pullulation, by removing the secreted liquid, we will certainly perform a beneficent and useful work. To succeed we will put into operation divers measures: *topical applications, irrigations, gargles, sprays.*

The *topical applications* are made by means of a forcipressure forceps, around which is rolled some hydrophilous cotton, so as to form a swab of the size of an olive; we should have two forceps thus prepared.

The following is the solution of salicylic acid, which I deem worthy of recommending to you:

Acid Salicyl., .	0.50 ctgrms. to 1 grm.
Alcohol, . .	. q.S. to dissolve.
Glycerine, . .	40 grms.
Infus. Eucalypt.,	. 60 grms.

M.

I proceed in the following manner with the first forceps armed with the dry cotton. I dry the throat so as to remove all mucosities and saliva which may cover the false membranes. The second forceps armed with the cotton impregnated with the wash is carried onto the false membranes. We must not be satisfied with a simple painting in the strict sense of the word, but we should rub the parts with a certain amount of force so as to detach the least adherent parts, without, however, excoriating the subjacent mucous membrane.

These local applications must be repeated every hour in the day, and three times in the night from nine o'clock. I insist on the absolute necessity of the frequency of these applications, and what M. Roux and Yersin have taught us only encourage me to persevere in this mode of practice already old with me. The bacillus contained in the false membranes secretes the toxic liquid; it is necessary therefore to remove it every time it is developed, and to attempt, by means of antiseptics locally applied, to destroy its vitality. Clinical observation had demonstrated to me this same fact when I observed an angina remain of slight severity as long as the topical applications were regularly made, but which became more intense when the treatment was stopped, to improve again when the treatment was energetically resumed.

If the false membranes are very thick and adherent I make, besides, an application of muriated tincture of iron two to four times daily:

℞. Perchloride of Iron.	
Glycerine, .	āā 10 grms.

We must be careful to allow the cotton imbibed in this mixture to drip the length of the vase or vial, so as to avoid touching parts other than those where the application is to be made. On contact with the perchloride the false membrane curls up, the subjacent mucous membrane is tanned, so to speak, and the throat is more easily cleaned.

Every two hours the local application is followed by an *irrigation*, which can be made with various solutions:

Medicinal lime water, boric acid, 4 per cent., Vichy water, carbolized water, 1 per cent. I am accustomed to use the lime water and the borated solution, which I find preferable. Vichy water is useful after the local applications of perchloride of iron, which are always somewhat painful. I am not so much a partisan of carbolized water on account of the great susceptibility of children to carbolic acid poisoning; I have seen several children really intoxicated by this agent without the local benefit being sufficient to warrant running such a risk.

The irrigations should be made warm and abundant; a large glass. They are possible only from the third or fourth year and upward, and we must take the pains of teaching the person having charge of the infant the manner of making them. The best way is to put the liquid in a glass reservoir which is placed about a metre above the bed; the apparatus carries a rubber tube provided with a stopcock permitting of graduating the flow of the liquid. We say at first to the child to rinse its mouth; then gradually it becomes accustomed to allowing the fluid to flow into its throat, and of suspending respiration for several seconds so that the fluid may not run down into the larynx. The manœuvre is repeated a great many times, taking care that the irrigation be short and gentle; in the interval the child is allowed to respire freely. By these gentle measures even a very young child can be taught to allow the irrigations, and a benefit results from it every time, appreciated even by the child itself. Children old enough to understand their feelings give evidence of great relief; the irrigation refreshes them, and calms the pain in the throat. I have seen young children ask for the irrigation, and to make it themselves, so great was the relief afforded. Besides it is the best way of removing the debris of false membranes detached previously by the local applications.

If the child is old enough to gargle, we must not neglect this useful measure of cleansing the throat, calming the pain and augmenting the local antisepsis.

Besides the irrigations and gargles, and especially where the early age of the patient renders these impossible, we will derive great benefit from sprays, five to six times per day. With a steam atomizer similar to those employed in surgery, we can make use of the following substances: Tincture of eucalyptus (one tablespoonful in a large glass of water), golden thymol.

The apparatus is placed at a distance of about one metre from the child, so that it may receive the larger part of the jet; each sitting should not last longer than fifteen to twenty minutes.

These are the measures to be put into operation systematically, so to say, as soon as a membranous deposit is observed in the pharynx; when the false membrane is situated at other points, I have observed that it is most advantageously combated by direct application to the parts.

For *nasal diphtheria* I have found of great advantage nasal irrigations with infusion of walnut leaves or borated water, or the application of the following ointment:

℞.	Sublimated and washed Sulphur, .	4 grms.
	Ax. ung., ...	30 grms.
M.	Ft. Ung.	

The nitrate of silver, which has been justly abandoned for diphtheria of the throat, succeeds very well when the false membrane is situated upon the lips; in this case a mild cauterization daily with a pencil of nitrate of silver has an excellent effect.

We sometimes see a false membrane on the skin of the cheeks, where a cutanteous excoriation previously existed, or an impetio for example; the best dressing in such cases is iodoform finely pulverized.

If the *ganglionic engorgement* is voluminous and painful, apply a cravat of cotton batting, upon which is spread the following ointment:

℞.	Extract Belladonna, .	2 grms.
	Potass. Iodat., . . .	1 grm.
	Ax. ung, . . .	30 grms.

Leave off the iodide if cutaneous irritation follows its application.

As regards the *general hygiene*, we must see to it that the patient be placed in a spacious chamber which is well and easily aërated; all curtains and hangings should be removed from around the bed so that the air may have free play.

The temperature should be kept at about 59° to 60°. The aëration should be constant, and be indirect, by a door communicating with another room, which is opened from time to time. In this way the windows of the patient's room can remain closed, and the exterior cold air will not reach his bed until it has previously traversed another room and taken on a little moisture and a little warmth.

Besides this, have evaporations in the room. Take two tin plates, in the one put tar, in the other the leaves of eucalyptus and water. These two plates are heated alternately by an alcohol lamp in such a way that the air of the chamber is constantly impregnated with the aromatic vapors. The air in the room is thus prevented from becoming dry, and an excess of water is maintained in it, a circumstance always favorable in such cases.

Care must be had that the child shall not take cold, being careful not to place its bed in a current of air circulating from the window and the door to the chimney, covering its shoulders when it sits up in the bed, enveloping its limbs in cotton wool, etc.

These are the principal outlines of the local treatment.

The *internal treatment* may be summed up in the following axiom: Sustain the forces of the patient by alimentation and by tonics.

All the various forms of food are permitted: panadas, racabout, eggs, milk, soup, meat juices, meat jellies. creams, etc. We must combat the repulsion of the patient, unfortunately so frequent, because to the pain and impuissance of deglutition there is superadded an anorexia due to the malady itself.

We must take the greatest pains to vary and multiply the dishes with which to tempt our little patient. The alimentation is a principal point, and if necessary, we may resort to artificial feeding by means of the œsophageal sound introduced by the mouth or by the nasal fossa.

Alcohol in all its forms, Spanish wines, brandies, champagne, should be given even to the youngest child and in large doses; 30—40 grms. of cognac to a child three years old, in the form of grog, per day. Champagne diluted with an equal quantity of water of vals or malaga mixed with an equal quantity of water are useful. Coffee and tea are to be recommended—in fact, anything that the patient would be likely to bear well.

As regards medicines I would advise you to prescribe the perchloride of iron in the dose of 10—20 drops in the twenty-four hours according to the age; one drop every hour, and never immediately after taking milk, as it will curdle the same, but in grog or bouillion. I continue the administration of this remedy throughout the duration of the disease; this is the preparation that has given me the best effects as regards elevation of the vital forces.

If the child has passed the fifth or sixth year, I give freely, according to the example of Trideau, copaiva and cubebs; either the oleoresin of cubebs in the dose of 4—6 grms. in an aromatic potion, or the following preparation (which can be administered only to patients who have passed the twelfth or fifteenth year):

℞.	Cubeb pulv.,	60 grms.
	Copaiva Balsam,	30 grms.
	Ferri Sub., Carbon.,	4 grms.
	Bismuth, Sub. Nitr.,	Q.S. to solidify.

Four boluses per day, in bread crumb. Each bolus of the size of the finger tip.

As to the chlorate potass., which was at one time regarded as a specific, I have never observed a real result that I could attribute to it. Marvelous in the affections of the mouth, it is not of the least utility in affections of the throat; furthermore it enfeebles our little patients if given in large doses.

Quinia likewise should be given with some reserve, because it is not always well borne by the stomach, and does not have the stimulant effects given by alcoholics, which should always be preferred to it.

This is the local and general treatment which seem to me to best fulfill all the indications in diphtheria.

If, despite these minute cares, suffocative croup declares itself with marked and growing asphyxia, nothing remains but tracheotomy.—*Tribune Medicale*.

TREATMENT OF ACUTE AND CHRONIC CYSTITIS.

[*Continued.*]

THE indications for internal medication contemporaneous with the external treatment are the same as for the latter.

Medicines are given internally which diminish the catarrhal secretions, modify its quality, favor its evacuation by augmentation of the diuresis; in one word, medicines which exercise a beneficial and salutary effect on the vesical mucous membrane in its entirety. Among these remedies we must count: gallic acid, tannin, the leaves of uva ursi, the balsamic substances, the balsam of copaiva, cubebs, turpentine, benzoic acid, sandal wood, kava-kava, matico leaves, lime water, the chlorate of potassium, the salts of lead, of iron, resorcine, salicylic acid, salicylate of soda, the mineral acids very much diluted, the carbonate of soda, Glauber's salt, common salt, lime, iron, lithine, soda. Among the remedies in question or those of the same order, the preference is given to gallic acid, to malic acid, the leaves of uva ursi, the balsam of copaiva, spirits of turpentine, the chlorate of potass., to salicylic and benzoic acid. Gallic acid is more digestive than tannic acid. If its use must be continued for any length of time, it is better to give the tannin at meal-time, as it is then better tolerated. The leaves of uva ursi are given in combination with herba centaureæ minoris, with orange peel, with quassia wood, (Dittel). Of all the balsamics the most active is the balsam of copaiba, which quickly diminishes the secretion and renders the urine acid very soon. The only inconvenience about it is its tendency to disturb the digestive functions and to excite the kidneys, so that the turpentine is frequently preferred to it. The capsules of matico are well borne, but they act less energetically. If the digestive tract is altogether intolerant of the balsamics, inhalations of the spirits of turpentine and of the ethereal oil of pines may be made. These inhalations may be either warm or cold.

Dittel advises cold inhalations, and for this purpose directs a teaspoonful of turpentine to be mixed with three hundred grammes of cold water. Latterly the kava-kava has been recommended as an anæsthetic diminishing the reflex irritability of the vesical nerves and as a diuretic. It may be given according to the following formula:

℞.	Deffurated Extract of Kava-Kava, .	0.grm. 20
	White Sugar, ...	3 grms.

M. Divide into 10 powders, 1 every 3 hours.

(It can also be given in the form of fluid extract fifteen to twenty drops, four or five times daily, Tr.) Lime water in combination with milk (a tablespoonful to a glassful) is excellent.

The chlorate of potass., employed by Edlessen is very useful, but one must be very careful in its dosage on account of the ulterior accidents it may produce. Edlessen gives it in daily doses of 5 grms. (= to 75 grs). His formula is as follows:

℞.	Potass Chlorat., .	5 grms.	
	Aq., Destill., .	100 grms.	
	Aq., Laur., Ceras, .	3 grms.	M.

Sulphuric acid in large doses (ten grammes per day) is a very useful remedy to combat the putrid fermentation and the bacteriurea (Furbringer, Roberts), whilst it has but little action upon the purulent secretion which passes into the urine in part without change. Boegholdt prefers the carbonate of soda.

Benzoic acid acts like salicylic acid. Among the mineral waters those most in vogue are the alkaline waters of Vichy and Neuenahr, the acidulated waters of Bilin, Radein, Glenhübel, Fachingen, Preblau, Geilnan, Borseck, the alkaline chlorinated thermal waters of Ems, etc.; certain other chlorinated, lithiated and soda mineral springs. They act as diuretics and antiseptics. In making choice of a remedy for internal administration, take into account the general state. If the patients are feeble, we must give them tonics and nourishing food, whilst all forms of food and drink which may have a tendency to produce a congestive state of the urinary apparatus must be avoided.

It is on this point that are brought into play all the various hygienic measures relating to clothing, food and climate, the various milk and cream cures, the methods of hydrotherapy, the prolonged sulphur baths, etc. The neuralgias of the vesical sphincter require, in order that the sensitiveness there be diminished, the methodical introduction of soft bougies. In certain cases internal or external urethrotomy and consecutive dilatation may become necessary.

The treatment of phlegmonous cystitis requires the early opening of the abscess which may form.

For urethral blenonrhagia or for pyelitis the therapeutic measures are the same as for blenorrhagic cystitis, except in cases of hydronephrosis or of myonephrosis sufficiently developed to call for surgical intervention.

In acute cases, rest in bed, warm baths, wet cups in the lumbar region.

Internally, quinine and morphia. The diet should be bland; for drink, water, milk of almonds, milk, or, if there be no dysuria, slightly acidulated drinks.

In chronic cases, a milk cure and the regular use of warm baths.

When the purulent secretion is very abundant, we may prescribe astringents, among which must be especially remembered, tannin, tannate of quinine, alum and lime water. If these remedies produce constipation, a little rhubarb may be combined with them or given separately. The following formula may be of advantage:

℞. Acid, Tannic, . 1 grm.
Pulv., G. Camph., 0 grm. 50.
Sacch. Alb., . . 5 grms.
M. Divide into 10 powders, 5 per day.

℞. Tannate of Quinine, 1 grm.
Sacch. Alb., . 5 grms.
M. Divide into 10 powders, 5 per day.

℞. Glycerine, pure, . 50 grms.
Acid, Tannic, . 1 grm.
Aq., Destill., . 100 grms.
M. To be taken in 2 days.

℞. Skimmed Milk, . 500 grms.
Alum, . . 5 grms.
M. To be taken through the day.

In the chronic cases of a torpid character we may have recourse to the balsamics, and administer in gelatine capsules, either copaiba or turpentine, or we may resort to cold inhalations of turpentine. In chronic cases the balsamics are very useful, and we should give 5—10 capsules of copaiba or of turpentine every day. At the same time as this specific treatment is carried on we may give tonics, direct a generous diet, and the mineral waters of Carlsbad, Vichy, Ems, etc. If in the course of a chronic pyelonephritis we observe the appearance of symptoms of urenia—for example, loss of appetite, malaise, vomiting—we can still obtain good results, even if only transitory, by the administration of certain mineral waters.

Selections.

Cocaine in Minor Surgery.

In an article in the *Revue de Chirurgie*, Drs. Reclus and Isch Wall discuss the subject of cocaine in surgery, advocating its more general use than obtains with most surgeons. They account for the hesitancy with which it is employed on the ground that it is believed to be dangerous, inefficacious and inconstant in its effects; but they endeavor to remove these objections by citing their own experience with the agent in upward of 300 cases, in which they have noted but very few instances of the ill-effects complained of every now and then, and these were transient. In four cases only were the symptoms serious, such as pallor, cold sweats, rapid pulse, dyspnea, dilated pupils, dysphagia, nausea, syncope, vertigo. But they question whether these, when present, may not be due, in part, to the pusillanimity or nervousness of the patient.

Illustrative of their method, and of the cases to which it is applicable, we may mention the following: For the purpose of doing away with the sensitiveness of the pharynx in order to introduce a stomach-tube, they paint the posterior buccal and pharyngeal mucous membranes with a solution of 10 per cent. cocaine (5 per cent. in young persons). An anal fissure ceases its annoyance and is cured by the insertion of a tampon of gauze soaked in the solution; and the same tampon will suppress in short order the anal itchings which harass the life of hemorrhoidal patients. Vaginismus is relieved in the same way. The authors even go so far as to claim that the performance of lithotomy is rendered possible by cocaine anesthesia. In operating on hydrocele, after the sac is emptied, a preliminary injection of cocaine renders the membrane insensitive to the tincture of iodine subsequently introduced. In serious cysts of the neck, spermatic cysts, and in synovial articular inflammations, where it is desired to wash with antiseptic solutions, the same procedure may be employed. To extirpate submucous cysts or adenomata, of the lip, for instance, it is recommended to insert a hyperdermic needle into the neoplasm, expressing the fluid as it is withdrawn. Injections for removing epitheliomata of the lip should be made in the tissues just around them. Six injections distributed equidistant around the anus renders it possible to forcibly dilate that orifice without general anesthesia.

When an operation involves the skin, a point of importance is that the injection should be made, not in the subcutaneous cellular tissue, but in the derma itself.

The injections are equally serviceable in an inflamed condition of the skin as when it is healthy, robbing the incision of abscesses of many of its disagreeable features. The list of conditions in which cocaine may be used to advantage might almost be continued indefinitely. And yet, notwithstanding the uniformly happy effects which these gentlemen are able to report from their rather extensive experience with it, the fact remains that great care must ever be observed with it. Numerous cases are on record of serious, and sometimes even fatal accidents, which from their repeated occurrence can only confirm our fears that they are due to the drug, and not to nervous excitement or timidity on the part of the patient. An instance which recently came under our observation showed this clearly. A physician of undoubted nerve had a painful phlegmon on the back of his hand; after anesthetizing with cocaine, it was opened without pain, but pallor, faintness, tendency to syncope, etc., rapidly became so pronounced as to require stimulants, the physician at the same time being much disgusted at his apparent weakness.

A point to which the writers of the paper do not call attention, and which is of great importance, is that whenever it is possible in the use of cocaine, the part intended to be anesthetized should be cut off from the general circulation by a string or band, so as to prevent the rapid dissemination of the drug throughout the organism; moreover, it conduces to more complete anesthesia with the use of much less solution. This is easily carried out in all operations on the fingers, toes, in fact all of the extremities—the penis, etc. The same object may be gained to a certain extent at other parts of the body, by isolating the tumor or part to be cut by surrounding it with a metal ring, held down tightly by a bandage.

More than a grain of cocaine should never be injected subcutaneously unless the patient's responsiveness to the drug be known from previous tests.—*St. Louis Med. Rev.*

Causes of Diarrhœal Mortality.

DR. EDWARD BALLARD for eight years has been studying for the English Government the causes of infantile diarrhœa. In his report (*British Med. Journal*) he points out that the causes of infantile diarrhœal mortality are multifarious, the influences bearing upon infants and the circumstances under which they are placed reacting on one another, now by an assisting, now by a repressing operation. The influence of the atmospheric temperature is, Dr. Ballard considers, very great, but exerted indirectly. The temperature of the earth is a far more important condition, it appearing that the summer rise of diarrheal mortality does not commence until the mean temperature recorded by an earth thermometer at a depth of four feet from the surface of the earth has attained somewhere about 56° F., no matter what may have been the temperature previously attained by the atmosphere, or recorded by a thermometer at a depth of only one foot from the surface. Rainfall also exerts an influence on diarrhœa, but apparently only indirectly, by preventing the rise or hastening the fall of the temperature of the earth. Wind and comparative calm also affect the mortality, other things being equal; calm in the diarrhœal season promotes it, and high winds tend to lessen it. Elevation above sea-level is only a minor influence, but Dr. Ballard feels himself in a position to say that the influence of soil is a decided one. Where the dwelling-houses of a place have as their foundation solid rock, with little or no superincumbent loose material, the diarrhœal mortality is, notwithstanding many other unfavorable conditions and surroundings, low, and, indeed, may be almost altogether unnoticeable. On the other hand, a loose soil, permeable more or less freely by water and by air, is a soil on which diarrhœal mortality is apt to be high. The presence of much organic matter in any soil renders it distinctly more favorable to high diarrhœal mortality than it otherwise would be, whilst excessive wetness and complete dryness of soil appear to be both unfavorable to diarrhœa. Density of population, density of buildings upon area, restricted circulation of air about and within dwellings, domestic darkness and general dirtiness and "fustiness" of dwellings, sewer or cesspool emanations, filthy accumulations, polluted drinking water, all exert a baneful influence. Social position, mode of feeding, mode of food-keeping, maternal management, occupations, are also maternal factors to be reckoned with.

Dr. Ballard thus summarizes, provisionally, the results of his investigation: "That the essential cause of diarrhoea resides, ordinarily, in the superficial layers of the earth, where it is intimately associated with the life-processes of some micro-organism not yet detected, captured or isolated; that the vital manifestations of such organisms are dependent, among other things, perhaps principally, upon conditions of season and on the presence of dead organic matter which is its pabulum; that, on occasion, such micro-organism is capable of getting abroad from its primary habitat, the earth, and having become air-borne, obtains opportunity for fastening on non-living organic material, and of using such organic material both as nidus and as pabulum in undergoing various phases of its life history; that in food, inside as well as outside of the human body, such micro-organism finds, especially at certain seasons, nidus and pabulum convenient for its development, multiplication, or evolution; that from food, as also from the contained organic matter of particular soils, such micro-organism can manufacture, by the chemical changes wrought therein through certain of its life processes, a substance which is a virulent chemical poison; and that this chemical substance is, in the human body, the material cause of epidemic diarrhœa. It will be observed that this provisional hypothesis is sufficiently elastic to include, as a common cause of diarrhœa, chemical products of bacterial life manufactured indifferently within or outside of the human body. Elasticity, to this extent, of a provisional hypothesis, has been necessary, for the reason that in the present state of our knowledge, certain cases and groups of cases of diarrhœa, not distinguishable from epidemic summer diarrhœa, have now and again been found to possess the faculty of being directly communicable from person to person."

Upon the results of his inquiry, Dr. Ballard bases some practical suggestions to sanitary authorities, the aim being to prevent the fouling of the soil with matters out of which the material of diarrhœa can be produced, to secure domestic cleanliness, dryness and cleanliness of the soil, lowering of ground water, prevention of rise of ground air, the free movement of air, protection of food from infection, due regulation of sewers, etc.

In studying the pathology of diarrhœa, Dr. Klein has been associated in the investigation, and some very important observations have been made. In the bodies examined of infants dead of diarrhœa, there were marked pathological changes, not only in the intestines, but in all the viscera; and not alone in the viscera of protracted cases, but in those of infants the total duration of whose illness had not exceeded twelve or fourteen hours. For the most part the intestines were empty, or only contained a little yellow fæcal matter or a little opalescent mucoid fluid, or the surface was coated with some thick creamy catarrhal exudation. The amount of obvious hyperæmia of the mucous membrane of the stomach and intestines varied; sometimes there was observed some follicular ulceration, both in the small and large intestine.

Generally there was more or less inflammatory thickening of the mucosa, and even in the cases of only a few hours' duration, denudation of the epithelium, both of the stomach and intestines. Now and then ecchymoses were seen, or even a little blood effused into the alimentary canal. The solitary and agminated glands of the small intestine were mostly prominent; the mesenteric glands were enlarged. The condition of spleen varied; it was sometimes congested, or exhibited hyaline degeneration of the arteries, or swelling of the Malpighian corpuscles with degeneration of the central portion of them. The condition of the liver varied; it was either congested or pale and bloodless, the former condition prevailing in the short, and the latter in those of longer duration; but in every case examined, there was one invariable condition, namely, fatty degeneration of the liver cells, slight in cases of short (only a few hours) duration, but pronounced and extensive, or complete in all parts of the organ, when the illness had been protracted. The kidneys, even when normal to the naked eye, were invariably found to be diseased when examined microscopically, showing inflammatory and degenerative changes, intense glomerulo and parenchymatous nephritis being demonstrated even in cases of very short duration. The lungs, although they might be in parts collapsed, presented marked evidence of acute catarrhal, or catarrhal and interstitial, pneumonia. The blood may be inspissated and coagulate imperfectly. There was nothing in Dr. Klein's microscopical investigations of the tissues, blood or excreta to indicate that in the cases which furnished the organs, blood or excreta sent to him, the malady was due to any micro-organism developing within the alimentary canal, or permeating any of the tissues; but it must not be therefore inferred that a specific micro-organism may not in some instances be present and even undergo development and growth within the body.

Commenting upon the fact that epidemic diarrhœa implicates the kidney as well as the intestinal canal, and in a manner similar to that in which scarlet fever implicates it, Dr. Ballard observes that probably in most cases of diarrhœa that recover, the morbid condition of the kidney clears up, as it does in most cases of scarlet fever that recover; but, just as in other cases of scarlet fever that recover from the immediate illness, the foundation of chronic disease of the kidneys may have been laid—disease which may perhaps, under the designation of one of its secondary results, prove ultimately fatal, or which may give a fatal tendency to some future illness from which a patient would otherwise be expected to recover—so it may also be with the kidney affection (similar in character) which is associated with diarrhœa. Indeed, it is not improbable that a previous attack of diarrhœa may have been the origin of many a case of chronic Bright's disease, which, so far as the patient's medical history is concerned, has appeared inexplicable. As regards nosology, Dr. Ballard considers diarrhœa to be a general disease of specific character, to which a distinct and specific name other than "diarrhœa"—the name of only one symptom—ought to be attached.—*Ed. American Lancet.*

Kentucky State Medical Society; Report on Progress in Obstetrics.

DR. J. G. CECIL, of Louisville, presented a good *resumé* of recent advances in his department.

Aseptic Obstetrics.—To the physician in private practice who delivers hundreds of women, rarely seeing evidence of septic infection, this does not appeal with such terrific force as it does to men in charge of lying-in hospitals, who see 10, 20, or even 30 per cent. of their cases die from blood poisoning. The same hospitals that twenty-five years ago were obliged to record this frightful mortality, now point to records of mortality in many instances less than one per cent. Whence this truly great advance? It is answered in one word, *cleanliness.* The use of bichloride of mercury in obstetric practice has been greatly diminished. Only the weakest solutions are used. Those who practice surgery ought to observe double precaution when doing obstetric work. When civil authorities recognize the truth embodied in this great discovery, surgeons will be prohibited from practicing obstetrics.

In *delivery of the after-coming head.*—Winkel mentions twenty-one methods of extracting the after-coming head. He considered the procedure best which combined pressure externally with maintenance of the head in that position best suited for delivery, which is: the trunk and arms, when born, are raised, two fingers in the child's mouth at the base of the tongue, by which flexion is secured. He makes pressure with the other hand through the uterus upon the head.

Infant mortality varies from 9 (Dubois) to 30 per cent. (Churchill). Authors advocate the application of forceps to the after-coming head, hastening delivery, even at the probable risk of cervical and perineal lacerations. The almost uniform success obtained now in the operations for the repair of these accidents impels us to certainly hesitate less in using forcible delivery when the life of the child is in such imminent peril.

Often we see the birth of the child arrested and its life sacrificed after the head has reached the floor of the pelvis. Fruitless efforts are made to turn out the head, while rotation at the outlet has not occurred and is overlooked. A little aid from the obstetric hand will cause the necessary rotation. Anything that causes delay of the head in its descent must be overcome. Time is the great factor, and the forceps can be applied in two or three minutes; the manual method requires from five to six minutes to extract the child's head.

Management of Third Stage of Labor.—An ingenious and plausible theory recently advanced by D. Berry Hart, (*Edinburgh Med. Review, October,* 1888), is that the placenta and membranes separate when there is a disproportion at the plane of separation between their area and their site of attachment. This disproportion between the placenta and its site brings about tension on the trabeculæ of the trabecular layer, and results in rupture of tissue. This occurs during relaxation following a pain in the third stage. The placental site is subject to increase during relaxation; the placenta, now bloodless or nearly so, does not respond; hence the disproportion.

Either misconception or misapplication of the Credé method has resulted in unfavorable results. The strongest objection urged against this plan is, that if expression of the after-birth is attempted too soon there is danger of tearing the membranes and retention of parts of them. The only serious *post-partum* hemorrhage that Dr. Cecil ever experienced was most probably induced in this way. The Credé, or active expression of the placenta, is only in the direction of assistance to nature; and the expectant plan is purely a physiological process. Ahlfeld remarks that the physician must be ever conscious that in performing Credé's method he is disturbing a physiological process. The mistake most often made is that of undue and unnecessary haste in delivering the after-birth. The conclusions arrived at after carefully weighing the arguments adduced by both sides, is a compromise. With Ahlfeld, wait, not necessarily an hour and a half, but until it can be reasonably ascertained that there is complete detachment of the placenta and membranes. Then, if the uterus be slow, or unable to deliver, assist in the expression by the Credé plan. It is a misapplication of the Credé method to attempt assistance of the detachment of the secundines; it is equally needless that we wait, as advised by Ahlfeld, for hours, if necessary, for the extrusion of the placenta through the vagina. There can be little harm in the introduction of a clean hand into the vagina for the purpose of removing a loose placenta.

Cesarean Section versus Craniotomy.—The trend of opinion among obstetric surgeons favors modified Cesarean section to craniotomy in all cases where the child is living. Yet the mortality from the improved methods of doing craniotomy has been reduced to a very small per cent., or to nothing in some hospitals. Dr. Busey, of Washington, has taken the extreme view that craniotomy ought never to be done on the living child. The best that can be claimed for American Cesarean sections, is a mortality of 45 per cent. to mothers and about 10 per cent. to children. The results obtained by Germans and Austrians are superior. The most recent data as collected by Caruso (*Arch. für Gynecol.*) show that the mother has three chances out of four and the child nine out of ten. Mr. Tait says amputation of the pregnant uterus will revolutionize the obstetric art, and in two years we shall hear no more of craniotomy or eviscerations, for this new method will save more lives than those proceedings do, and it is far easier of performance. It is the easiest operation in abdominal surgery, and every country practitioner ought to be able and always be prepared to do it.

The consensus of opinion concerning the treatment of *extra-uterine pregnancy* is rapidly narrowing itself down to primary laparotomy, to the exclusion of all other modes. Quite a number of Americans adhere to the use of electricity. Others agree that electricity may be used with safety and certain beneficial results up to the third month of gestation. There can be no doubt that the fetus is easily destroyed by electricity, but those who have practiced this mode are not so unanimously agreed as to what becomes of the products of conception, or as to the efficacious nature of the current upon the tumor remaining. Mr. Tait says the element of danger is not the fetus, if killed by electricity, but the placenta; this may go on developing enormously after the fetus has died from natural causes. This has been proven by the observation of Berry Hart and confirmed by Knowlsby Thornton. The tendency after electrolytic treatment is toward suppurative septicemia and its various contingencies (Currier); this, with the uncertainty as to future of the tumor that is left and the immediate danger of the treatment, more than counterbalances the dangers incident to primary laparotomy. From all reports we agree with Mr. Tait that abdominal section is the procedure that promises the most certain and safest results in ectopic gestation before rupture occurs. After rupture there can be no difference of opinion.

In the discussion Dr. A. D. Price said that a most important duty in the management of pregnancy is the chemical and the microscopical study of the urine, frequently and often repeated. Prophylaxis in puerperal albuminuria accomplishes much. The avoidance of excitement and resort to uniform temperature, diaphoresis, diuresis, hydragogue cathartics properly used, dry-cupping, and especially milk-diet and the administration of iron, will often carry the patient safely through this dangerous period.

When should the paturient woman have an *anæsthetic?* When her suffering demands it. She should not be terrorized, depressed and unnerved by pain, when it is so easily and safely prevented. Chloral is valuable in the first stage, and renders less chloroform necessary during the second. He has used chloroform almost invariably during a period of twenty-five years, and has not seen a case in which it was contra-indicated, or in which it had any bad effects, save occasionally to lessen the pains to such a degree as to require the forceps to complete labor in reasonable time. A fatty heart, if known, is the only condition that would deter its use.

When called to the woman, it is of the first importance to *diagnosticate the position* of the child. If the ordinary method does not give positive information, introduce the hand, administering chloroform if necessary. The occipito-posterior position is easily (unless head is severely impacted) corrected by introducing the hand or applying the forceps in a reversed position and rotating the occiput forward.

How long should labor continue? Applying forceps and complete delivery before the vagina becomes hot and dry, and before exhaustion supervenes. The forceps, properly and wisely used, save many a mother and preserve the life of many a child.

The great question of the day is *aseptic* midwifery, the principles of which should be constantly urged upon the medical man, and by him persistently taught to the laity. When it is remembered that most of the ills of the puerperal woman are septic in origin and preventable, the medical man is not at liberty to neglect any method by which such dangers are avoided.

Aseptic midwifery is secured by perfect cleanliness of physician, nurse and patient. The patient, after the rectum is emptied by an injection, should be bathed from waist down with water and soap, wiped dry, and sponged with a bichloride solution, 1 to 1,000. The vagina should next be syringed with a like of 1 to 3,000. The clothing of the patient and bed should be clean, discarding everything the least soiled. The nurse as well as the physician should clean nails, scrub hands with water and soap, and then wash them in a bichloride solution, 1 to 1,000, before touching the patient. This should be repeated whenever the hands become contaminated. After labor the patient should be washed with water and soap, and sponged with a bichloride solution, 1 to 1,000, injecting a 1 to 5,000 solution into the vagina or within the uterine cavity if the forceps have been used or it has been necessary to introduce the hand into the womb. Leave nothing soiled about the patient or bed, and apply a napkin wrung out of a bichloride solution 1 to 3,000. Keep up this method till the bruised or lacerated tissues are healed, and the reward will be a speedy restoration. Prevention is worth more than all the efforts to cure. — *Va. Med. Monthly.*

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The Treatment of Gastric Indigestion.

BY H. A. HARE, M.D.,

DEMONSTRATOR OF THERAPEUTICS AND INSTRUCTOR IN PHYSICAL DIAGNOSIS IN THE MEDICAL DEPARTMENT, AND IN PHYSIOLOGY IN THE BIOLOGICAL DEPARTMENT OF THE UNIVERSITY OF PENNSYLVANIA.

It would be difficult to find any subject in medicine which is more hackneyed than the one on which I now write, but it has seemed to me that some comparatively recent investigations into the physiology of digestion bear so closely upon this important subject, and are so generally ignored by the practitioner, that what I have to say may not seem trite.

Very commonly in the treatment of gastric dyspepsia proper, pepsin is given in such absurdly small doses as to be almost useless, and yet the prescription as it is taken is intended to aid the true gastric juice, which is not thought strong enough to be capable of performing its functions aright. This is not by any means the result attained in the majority of cases, for the following reasons—indeed, the direct digestive action of the dose administered probably brings about the smallest part of the good achieved.

It is a mistaken idea to believe that pepsin and hydrochloric acid are simultaneously secreted and utterly independent bodies, or, in other words, that the pepsin may be formed even if the glands fail to form the acid. We know, from the experiments of Heidenhein, and of Langley, as well as many others, that pepsin as such is not secreted by the glands ready formed, but that these tubules secrete a so-called "mother substance" called pepsinogen, which is *absolutely impotent* until it is changed *into pepsin* by the *presence of hydrochloric acid* or *sodium chloride*. Consequently we learn that the two digestive elements are very closely associated, and that *no acid means no pepsin*. In normal life this acid is derived by the splitting up of the chlorides in the blood supplying the glands by the lactic acid which is present almost constantly in the stomach, owing to decomposition of carbo-hydrates. This assertion made by Maly is also confirmed to some extent by Jul. Thomsen, who has shown that very weak acids may displace stronger ones from their bases, and even appropriate the greater part of the base. This is doubtless the reason why common salt is so useful a condiment, since it is broken up in the stomach, thus setting free hydrochloric acid, besides keeping up the alkalinity of the juices of the body which is so necessary to health and the future secretion of gastric juice. It also explains, in a very ingenious manner, the well-known fact that salt added to a glass of milk increases its digestibility to a great degree. Further than this the usefulness of salt in small amount taken before meals does not depend, as has been thought, upon an endeavor on the part of the stomach to neutralize the alkali present in a normally acid medium, whereby an excess of gastric juice is secreted, but upon the reasons given above. We find, therefore, that in cases where there is reason to believe that gastric digestion is imperfect, common salt should be used in increased amount in the food so that the quantity of hydrochloric acid may be increased. If, however, there is a reason to believe that lactic acid is present in too a small quantity to split up this salt, then hydrochloric acid must itself be used, and, where it is employed, given freely, in order not only to act thoroughly itself, but also to perform an equally important function, namely, the conversion of pepsinogen into the active body pepsin. In other words, deficiency of pepsin in the juice is to be corrected, not by a prescription containing much pepsin and little acid, but rather the reverse, for the pepsin in the prescription is after all an extraneous product, while the pepsin brought into being by the acid is a normal secretion. Of course the quantity of pepsin must depend on a normal formation of pepsinogen, but it should not be forgotten, on the other hand, that as pepsin acts by catalysis, and is most powerful ferment, only very small quantities of it are absolutely necessary, while large amounts of hydrochloric acid, comparatively speaking, are essential.

In an article recently published in the *Revue Médicale de la Suisse Romande*, Bourget has enunciated some thoughts which are so completely in accord with the views here expressed as to be worthy of quotation. He believes, as does the writer, that the hydrochloric acid is generally the secretion which is lacking in amount, and recommends its free employment as the most important part of the treatment of gastric indigestion. He does not seem to do this because he believes it to increase the pepsin, but only because he thinks the acid secretion is more apt to be deranged than is that of the ferment. According to my own practical experience and the much more reliable information gained by experimental research, it is to be concluded, therefore, that pepsin is to occupy the least prominent position in a prescription for gastric disturbance, and that the acid is to be freely used. Indeed, I am so surely convinced of the importance of the acid in its double sphere that I fear I am sometimes inclined to give almost no pepsin at all.—*University Med. Mag.*

Medical Society of Baltimore.

DR. DAVID STREET related a case of sarcoma of the stomach with specimen.

The case which I shall briefly relate is one in which Mrs. E.—, to whom I was called on Sunday, April 7th, 10 A. M., passed an hydatiform mole, which I now exhibit for your inspection.

Mrs. E— is 47 years old this month, is a mother of several children, and is in good health. On my arrival I learned that pains of a rhythmical character came on during the night, and the lady, supposing she was suffering from a miscarriage, sent for a midwife in the neighborhood. In a short time a fleshy mass mingled with round bodies grossly resembling grapes was passed, and the midwife recognizing the unusual appearance advised them to call a physician.

I examined the mass which had just been passed and found it to composed of a fleshy substance much resembling early placental tissue, holding in its trabeculæ and bearing upon its surface a multitude of little cysts varying in size from a pea to that of a large marble.

These cysts are evidently due to dropsical or cystical degeneration of the vili of the chorion. You can see how they are attached to the mass by little pedicles. I examined the contents of several of these cysts beneath a microscope and found no scolices or hooklets of real hydatids. Nor did I expect to find any true hydatids, being, so far as I know, unknown in this location.

Upon examination of the lady I found the os-uteri patulous, but admitting the tip of the index finger. Cervix was thick; within the uterus I could distinctly feel more of the cystic mass. I succeeded in breaking off only a few small pieces of the mass which were similar to that first passed. She was losing some blood, but not a large amount. I advised her to let me administer chloroform and dilate neck and remove the mass. This the lady and her husband then and since persistently declined to have done.

It is now five days since the specimen was passed, and the lady is now going about the house, has no pains and no hemorrhage. I have given a large quantity of ergot, but failed to produce pains, whilst I have arrested the hemorrhage. Of course this mass must sooner or later come away. I presume what is left will continue to grow rapidly.

It has occurred to me, since attending this case, to ask what is the cause of that peculiar perversion of nutrition causing the chorinic villi to assume the condition of cystic degeneration in the formation of the hydatiform mole.

Case 2 of the same kind which I desire to mention is as follows:

Mrs. L. A. G—, married, a mulatto, occupation laundress, æt. 43 years, supposed she was seven months pregnant; her abdominal development corresponding to that of a woman at such a period. I found her suffering with rhythmical pain and losing considerable blood. Examination revealed the case to be one of hydatiform mole. Assisted by my friend, Dr. J. D. Blake, I introduced hand and took away the entire contents of uterus, which consisted of the cysts peculiar to hydatiform moles.

This case occurred December 12th, 1880. The patient died at end of four weeks. Post-mortem showed that death was due to metritis and peritonitis.

Case 3 which I shall relate, and the specimen belonging to which I now show you, is that of Mr. G. W. D—, æt. 55 years, engineer, married; has three sons living, adults and healthy; has always been a moderately temperate man; was taken with dysentery, August 15th, 1888. During the attack he suffered with severe rectal tenesmus and voided much mucus and blood. Dysentery continued two months before ceasing. About this time pain and swelling developed in epigastrium and right hypochondrium. He was much prostrated, and suffered from nausea. From this time he continued to grow worse, until March 8th, 1889, when I was called to see him. On my first visit I noted he was very anæmic, extremely emaciated, prostrated, confined to bed; was cachectic, the skin having a yellowish pallor, but not jaundiced, the sclerotica being clear and normal. Told me he had been treated by several physicians, from none of whom did he obtain any relief. He suffered from constant pain in region of liver. Area of hepatic dullness increased and extended about four inches below ribs on right side and nearly to crest of illium. There was no marked tenderness over region of liver, and a large, hard and nodular mass was easily outlined in regions named. The liver was evidently much enlarged. The bowels move daily, and the alvine evacuation are melænic. Diagnosed cancer of liver, and ordered ℞ morph. sulph. g. 1/8 when suffering. This small quantity gave complete relief, and was not increased at any time. I suppose his hepatic cancer was probably secondary to gastric cancer, but so far had nothing to confirm it.

March 17th.—Condition unchanged; anorexia; no jaundice; takes milk, light bread, etc.

March 19th.—General symptoms unchanged. On my arrival showed me some dark, hard masses, which had vomited. Examination proved them to be the rinds and ligneous cell walls of oranges, stained black, probably with the coloring matter of the blood. The urine was examined and found normal.

March 20th.—Sent for me, and on my arrival showed me about one pint of an offensive grumous liquid which he had vomited. Microscopic appearance, dark bloody and mixed with mucus. Microscopical examination showed fat-cells, red blood cells, all separate and no tendency to aggregate in rolls, epithelium abundant, fasciculi of striated muscular fibre. At this time I diagnosed primary cancer of stomach. Inquiry next day failed to ascertain that any meat had been eaten for several weeks. This I deem incorrect. No doubt the patient had eaten the meat and it lodged in some crypt or fold of mucous membrane.

March 21st.—More prostrated, voice sepulchral—on this date learned his brother died of cancer of the liver about two years ago, and that his mother seems to have some disease of a similar character. M. D., died March 27th, 11 P. M.

Post-mortem.—Made by my friend, Dr. E. T. Hein, in my presence March 28th, 1889, showed body extremely emaciated and cachectic, tumor plainly visible, abdomen opened, liver much enlarged, hard, nodular all over, tears easily, section shows general cell infiltration and little healthy hepatic structure. The centre of many of the nodules showed fatty degeneration.

Stomach examined, found adherent to anterior abdominal wall by inflammatory adhesion; on being opened the walls appeared thicker than normal. On anterior wall, near the lesser curvature and about one inch from pylorus, was found an indurated growth about 2⅔ inches in diameter, walls at periphery rampart-like and centre disintegrated and excavated and filled with a grumous detritus. This excavation was found to have perforated anterior wall, and would no doubt have caused death, but for adhesive peritonitis.

Now, Mr. Chairman, I have releated this case in detail in order to show the difficulty of *always* diagnosing primary cancer of the stomach early in the disease. This was a case of primary cancer of the stomach, with secondary cancer of the liver, the secondary growth in this, as is often the case, outranking in apparent importance and obscuring the primary growth. The history of a severe and prolonged attack of dysentery just prior to the development of the hepatic tumor, pain, etc., would point to the probability of chronic hepatic abscess. But at the time I saw the case the tumor, induration, nodulation, pain, tenderness, emaciation and cachexia pointed unmistakably to cancer of the liver.

Nothing occurred to confirm my suspicion of primary gastric carcinoma until March 20th, twelve days after I first saw the case. No history of prior vomiting except when orange rind was vomited, and strange to say I learned they had been eaten about five days before being vomited, showing, instead of gastric *irritability*, an unusual *tolerance* upon the part of the stomach. It is true, when vomiting did take place, it was of a character to determine the diagnosis with precision. Notwithstanding grumous vomiting is one of the most salient symptoms of cancer of the stomach referred to by text-books, I am frank to say I have seen it in few instances in cases that have come under my observation.

It is evident that an *ensemble* of all the symptoms in a given case must be considered in order to arrive at a diagnosis. Certain facts, however, serve as good landmarks in diagnosis. Cancer of the stomach occurs rather more frequently in men than in women. Three-fourths of all cancers of the stomach occur after 40 years of age. In four-fifths ($\frac{4}{5}$) of all cancers of the stomach a tumor can be detected. In about eighty-eight (88) per cent. the cancer occurs at the pyloric extremity. History of heredity contributes something to assist us sometimes. In some obscure and latent cases diagnosis is impossible.

Dr. Frank C. Bressler said in diagnosing cancer of the stomach we have more to contend with than almost anything else in medicine. If in a patient over 40 years of age we have gastric eructations, we may suspect cancer. He had a case that Dr. Streett saw with him, of a woman who had grumous vomiting, and they had diagnosed cancer of the stomach. She passed out their hands, and the doctor who then had her in charge diagnosed stricture of the œsophagus. He had a case of a woman from another doctor, who not suspected cancer. He examined her and found a tumor, hard and nodular, over the liver. When she died the post-mortem showed a small cancerous ulcer in the stomach and two or three hundred cancerous nodules in the liver. Another case of a gentleman who was emaciated and cachectic, with grumous vomiting. He tried the hydrochloric acid test for two weeks and found it absent during that time. He diagnosed cancer of the stomach, and when the patient died post-mortem showed a cancerous perforation at the pylorus, which had eaten into the liver, which was one mass of cancerous nodules. Another case of a man 70 or 80 years old, a hospital patient, who was very ignorant, and a satisfactory history could not be obtained from him. This patient was given up as an advanced case of phthisis. When he died the post-mortem showed almost every organ in the body to be involved. Another case, similar to the last in obscurity, occurred at Bayview. He was set down as a case of chronic bronchitis. One day he would have, on auscultation, sonorous and mucous rales; the next day they would all have disappeared. The post-mortem in this case showed cancer of the œsophagus, the lungs being full of cancerous nodules, the formation of these nodules in the lungs explaining the auscultatory signs of chronic bronchitis.

The registers of the English hospitals show that heredity is of little importance in cancer. In the hydrochloric acid test, if the hydrochloric acid be absent, the question is, what causes its absence? as there are many causes for its absence besides cancer. The only sure indication the hydrochloric acid test will give us is that its constant presence *excludes* cancer. Its occasional absence may be caused by other conditions besides cancer. When we shall have arrived at that state of knowledge where we are able to diagnose cancer of the stomach early, then we should call in the surgeon and do a laparotomy and remove the cancer.

Dr. J. W. Chambers said the specimen looks like a soft medullary cancer. Its position is rare; usually cancer of the stomach occurs on the posterior wall of the organ. It is not scirrhous; it is the kind that may have nodular growths accompanying it all through the alimentary canal. The diagnosis of cancer of the stomach is very difficult. There is no certain method; in fact, all diseases below the diaphragm are involved in so much obscurity as to make their diagnosis difficult. Clinicians are laying too much stress on the vomited matter. The patient may retain things in the stomach for a week without any very serious disturbance, as shown by the case that Dr. Streett had reported. The character of the vomited matter is a factor in diagnosis, but it is not the most important factor. The hydrochloric acid test is on trial. If the hydrochloric acid is absent, it is presumptive of cancer, but there are many other diseases that will interfere with the secretion of hydrochloric acid. Trousseau says if a patient of cancerous age (over 40) suffers from phlebitis, it is a symptom of cancer. Surgeons are not as enthusiastic as heretofore in operating for cancer of the stomach. Dr. Bernays, of St. Louis, has recently introduced an operation. He does gastrotomy, curettes the stomach and dilates the pylorus; he leaves a fistulous opening, and when the opening closes, he cuts down and curettes again. There are no successful cases of operation for cancer of the stomach. The English have been condemning it for a year, and the Germans are also doing less than heretofore.

Dr. David Streett said he agreed with Dr. Chambers as to the infrequency of grumous vomiting in cancer of the stomach. This was the first case where he had seen it. He did not agree with Dr. Bressler as to the non-importance of heredity. A man may have a peculiar vitiated cell growth that will tend to cancer, just as much so as in insanity.

Dr. Wilmer Brinton said he was interested in the case of hydatiform mole; cystic degeneration of chorionic villi is rare. He had never seen a case of it. He would ask Dr. Streett what was the condition of the patient at that time, (April 11, 1889), and whether she had any septic trouble? He would also ask Dr. Streett to watch the case and report its ultimate issue to the Society.

Dr. David Streett said the condition of the patient was good. She had no pain or hemorrhage and no septic trouble. She was at present attending to all of her ordinary household duties.

Dr. John W. Chambers said he had seen three or four specimens of hydatiform mole, but had not seen any cases. He believed that they were cases that called for operative treatment; that there was some danger in the operation, but not as much as in the disease if left undisturbed, and as septicæmia is imminent, the patient should be informed of the danger of non-interference.

Dr. Thos. B. Evans related

A CASE OF SPINA BIFIDA in a babe five weeks old. It was the second child of its mother, who was attended at its birth by a midwife who gave a fatal prognosis for the child. The child was five weeks old when he saw it, and it bade fair to continue to live. It was well nourished and well developed in every other part of its body, there were no enlarged fontanelles, no hydrocephalus and no club feet. It takes nourishment well, and complains of no pain except when the tumor is touched. The tumor is in the usual situation, is sessile and about the size of an orange; it is of a bluish red color, soft and moist all the time as though there were a continuous exudation of the contained fluid. The covering or walls of the tumor is composed of the dura mater and probably the arachnoid, but there seems to be no skin covering it. He thought there was a hernia of the cord, as the very slightest touch caused pain. He had not interfered with the tumor, but had contented himself with simply protecting it from compression, by enveloping it in cotton held in place by adhesive straps and a loose bandage.

Dr. Wm. H. Norris said he saw a case of spina bifida, a few days ago, in a child four weeks old, a dispensary patient. The patient is one of twins, is hydrocephalic, emaciated, and its legs are rigidly drawn up and maintained in that position. Its parents are Bohemians, and no satisfactory history could be obtained. The tumor in this case was about the size of a small orange and sessile. He punctured it with a hypodermic needle and a small quanity of clear fluid came away. He then dressed it with cotton kept in position by adhesive straps.

Dr. J. W. Chambers said he knew of a case of spina bifida in a child three years of age, who died of some intercurrent disease. He saw another case with Dr. Friedenwald of a girl fifteen years old. As to the treatment of spina bifida, any fluid that may be injected will follow the circulation into the meninges and ventricles of the brain and set up more or less irritation according to the nature of the fluid used. As for treating it like hydrocele, by drawing off the fluid, he thought we should not draw off more than just enough to relieve tension, for if too much fluid be drawn off, the cord would come down on the bones and then produce a fatal irritation. If the sides of the tumor could be brought together near the base and held in that position long enough for plastic adhesion to take place and thus make a pedunculated tumor of it, it might then be excised. Gaillard Thomas reports two cases of anterior spina bifida, where the tumor was situated in the pelvis, one of which he tapped with a fatal result.—*Maryland Med. Jour.*

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Microscopy.

The Microscopists.

EXPERIMENTS WITH CRYSTALS PRODUCED FROM SALICINE—EASTERN VISITORS PRESENT.

THE San Francisco Microscopical Society held a regular meeting at its rooms, 120 Sutter Street, June 26th, 1889, with a large attendance of members. President Payzant occupied the chair. Frank E. James, M.D., and Prof. H. M. Whepley, of St. Louis, were present as visitors; also M. R. Roberts, of this city, and L. M. King, of Santa Rosa.

The President announced, with regret, the death of F. L. Howard, for many years a member of the Society.

Mr. James, who is attending the convention of the American Pharmaceutical Association in this city, is well known to all microscopists by his able contributions to this branch of science. He gave an interesting account of a phenomenal class of crystals produced from salicine by the extreme cold method as discovered by him several years ago, and exhibited a series of slides with the polariscope, which were pronounced by all to be the most beautiful crystallizations ever seen. The process depends on bringing a saturated solution of salicine made with distilled water in contact with cold below the freezing point, and Dr. James' explanation is, that the rapid congelation of the water interferes with the usual arrangement of the crystals, producing the wonderful series before alluded to, which are entirely unlike any forms resulting from crystallization at the ordinary temperature. The proper manner of making white zinc cement and permanent oxidized enamels for ringing slides formed a portion of his interesting contribution to the meeting.

H. M. Whelpley, of the St. Louis Microscopical Club, also addressed the Society on the subject of the microscope in its relation to pharmacy, pointing out the rapid progress being made in the detection of adulterations, and the interest manifested generally among pharmaceutists in studying the character and acquiring a correct knowledge of the crude constituents of the *materia medica.*

Pond life was illustrated by numerous specimens of Ceratium longicornis, and the beautiful little organism, Artemia salina, or brine shrimp. Entomology was represented by prepared slides of the larva of several varieties of the Papilio family.

Professor Hanks presented for examination a venerable edition of a work on pharmaceutics published by Robert Lowell in 1661.

Mr. Riedy donated a copy of Trembley's work on fresh water polyps, an exceeding rare and valuable book, published in 1744. C. P. BATES, *Recording Secretary.*

Gleanings.

A CASE OF ALOPECIA AREATA AFTER OPERATING ON THE NECK.—Pontoppidan has made an observation in a man (*Monatssch. f. prakt. Dermat.*, viii, 2, S. 51), which is closely related to the examinations made by Joseph (Berlin) of the second cervical nerve of the cat. A girl ten years of age was operated upon for a glandular swelling the size of a pigeon's-egg in the left carotid region. That portion of the glandular growth imbedded deeply was adherent to the external jugular vein, and during the loosening of it a rather violent bleeding from a rent in the vein occurred. The hæmorrhage was stopped by tampon with iodoform gauze saturated with sublimate solution and compression with bandage. After removing the latter on the twenty-first day two symmetrically bald spots, circular, about the size of a dollar, were discovered on the back of the neck. Micro-organisms could not be found. The spots rapidly grew in size; new ones appeared toward the middle of the head and behind the ears, and ran together. After about seven weeks the height of development was reached, and then the extent of symmetrical baldness corresponded to the area supplied by the N. occipit. maj. and minor and the rear branch of the N. auricularis magnus. The skin was smooth and normal, sensibility not disturbed. Five weeks later the entire portion was covered quite thickly and uniformly with new lanugo-like hairs.

Here is an illustration of an alopecia areata occurring after a lesion of the upper cervical nerves. The most probable explanation is that a neuritis was caused by the tampon and the compression of the origines of the cervical nerves. The symmetrical spreading of the baldness toward the side not operated upon is remarkable. Pontoppidan considers an invasion of the corresponding nerve area of the other side, perhaps by a neuritis centripetally transmitted, as possible. —*Centralblatt für Physiologie.*

A CASE OF TÆNIA IN A BABY TEN WEEKS OLD.—A baby ten weeks old was brought to Dr. Mensinga, of Flensburg, the father of the child having previously shown to him a sort of worm said to have come from the anus of the patient. With the child the parents brought, in alcohol, about twenty links of a tænia. The baby had just had a stool. The fæces in the diapers were quite compact and full of moving proglottides which, changing peristaltically their forms, completely pervaded the fæces.

It was discovered that the man had killed a pig when the child was two weeks old and, on finding that it was measly, sold it in the city. Peculiar circumstances must have combined to introduce the germ of the tænia into the baby. Nourishment—milk not boiled—being given to the latter with the bottle, the dishes had probably been used for the milk as well as for the pig-killing, and not being cleansed thoroughly, had thus carried the affection to the child. —*Internationale Klinische Rundschau.*

THE ACTION OF OIL OF TURPENTINE IN IDIOPATHIC CROUP.—Lewentaner (*Centralbl. f. klin. Med.*) formerly reported his success with oil of turpentine in the treatment of croup, but there might possibly be a question raised about the correctness of his diagnosis, since no membrane was found expectorated. He now reports two other cases, both of them in *extremis* when the treatment was commenced, and both of which were saved, apparently by the use of turpentine.

The first case was a child of two years, who had exhibited signs of stenosis for several days, and who had reached about the seventh day of the disease. When first seen by the author the asphyxia was extreme, the cough entirely aphonic, the face pale and livid, and the pulse scarcely perceptible. No membrane had been expectorated. A teaspoonful of oil of turpentine was administered, and ice compresses put around the throat. The child slept more quietly through the night, received another dose of turpentine on the next morning, and during the day expectorated a portion of membrane of considerable size. Under continued administration of turpentine in smaller doses, improvement steadily progressed.

The second case was that of a child of four years, who had been attacked suddenly with symptoms of stenosis, and was in the eighth day of his illness when seen by the author. He then exhibited extreme dyspnœa, with pale skin, and filiform and scarcely perceptible pulse. There had been no membrane expectorated. A teaspoonful of oil of turpentine was given, and the continuous atomization of a mixture containing turpentine prescribed. Very soon after the ingestion of the drug there was a violent paroxysm of coughing, and a large piece of membrane three to four inches long was expectorated. As it, however, continued to form, the treatment was persisted in, a teaspoonful of the medicine being given twice a day. Membrane was coughed up in abundance, and in a few days the child was well. The author is fully convinced that turpentine has a specific action on the disease.—*Am. Jour. of Med. Sci.*

CALCULATION OF SMALL QUANTITIES OF SUGAR IN THE URINE.—To ascertain the quantity of sugar in the urine when less than 0.2 per cent. is difficult but useful. Some individuals have but a small quantity of sugar in the urine when they have taken a great deal of hydrocarbons, and in the lighter cases of diabetes it is this kind of food that causes glycosuria.

Pollatschek (*Deutsche Med. Wochenschrift*, No. 18, p. 354, 1888) advises to treat the urine with carbon before reducing the copper. A small quantity of charcoal is put into the test-tube, the mass is stirred up and filtered; the urine is then clear and freed from substances which might render the analysis uncertain. In another test-tube equal proportions of solution of sulphate of copper, Rochelle salts and soda are mixed and heated. If the mixture remains clear the filtered urine is added and heated again; the precipitate is yellow, rarely red. For control subnitrate of bismuth, hydrochlorate of phenyl-hydracine, which Jaksch recommends, is used.—*Revue des Sciences Medicales.*

CHLOROSIS.—Dr. Huchard, *Rev. de Clin. et Thérap.*, points out that it is a mistake to push the ferruginous treatment in all cases of chlorosis. The total amount of iron in the body under ordinary circumstances is not more than a few grammes, and even in chlorosis all of it has not disappeared. Any surplus iron is more likely than not to give rise to gastro-intestinal irritation. He prefers to give the iron in the form of iron filings mixed with chalk, powdered coffee, or rhubarb, in the form of a powder. Vinegar, to which chlorotic patients are often extremely partial, is not to be absolutely forbidden; on the contrary, a draught containing hydrochloric acid, taken after each meal, is a powerful aid to digestion. The constipation should be overcome by means of podophyllin, and the uterine functions should be stimulated at the approach of the menstrual epoch by means of hot baths and an infusion of saffron internally. Massage and general gymnastics are also to be commended as adjuncts. In many cases when iron has failed, arsenical preparations, in conjunction with bitters, are successful, and the binoxide of manganese has given good results when both iron and arsenic had been tried in vain. The binoxide can be given in a powder with charcoal and powdered calumba root, or it may be given in the form of the lactate of manganese, made into pills with extract of cinchona. When iron is well borne he recommends the following formula:—℞ ext. cinchonæ, ext. gentianæ, ext. rhei., āā, 5 grammes; ferrum tart., 5 grammes; ext. nucis vom., 50 centigrammes; ol. anisi, mv.; glycerine, q.s. To be mixed and divided into 100 pills. Two to be taken before each meal.—*Lond. Med. Rec.*

Salicylate of Mercury.—Dr. W. C. Caldwell, of Chicago, Ill., in an original communication upon salicylate of mercury in the *Therapeutic Gazette*, concludes thus on this drug:

"1. Because the salicylate is likely not absorbed from an acid membrane, it will usually produce less derangement of the stomach than the bichloride.

"2. Because the mercury is combined with an organic radical, it will produce less irritation during both first and elimination-contact actions than the bichloride.

"3. Because the salicylate contains less mercury and acts slower than the bichloride, it has less action on albumen and on bacteria of putrefaction and far less on digestion.

"4. Because the salicylate passes through the stomach to the duodenum and there is dissolved, it appears that exhibited with hydrochloric acid it would be better adapted for an intestinal antiseptic than the bichloride, which probably is dependent mainly on its elimination-contact action in the intestinal canal.

"5. Because the mercury is combined with an organic radical, it should not be prescribed with mineral salts of the heavy metals.

"6. Because iodide of potassium given with it converts it into the biniodide, the salicylate should not be exhibited at the same time, unless it be in small doses.

"7. Because the salicylate is insoluble in acids, it should not be prescribed with drugs requiring an acid menstruum for solution.

"8. Because chemical change occurs when combined with muriate of cocaine, they should not be given together.

"9. Because the bichloride is probably more active and effective in syphilis, it probably is the best when it agrees.

"10. Because the bichloride has such marked elimination-contact action, it is the better when such action is desired, as in acute tonsillitis, parotitis, etc."

EXPERIMENTAL STUDIES ON HYPERPYREXIAS.—M. Ch. Richet, ("Jour. des. Soc. Sci.," No. 20, 1888, has studied the influence of artificial hyperpyrexia, and the result of maintaining the high temperature for a considerable length of time. He says that animals whose temperature attains 45° C. [113° F.], and even 45.6° C. [114° F.], may survive if this thermic stage lasts for a short interval. But an animal succumbs if its temperature is about 43° C. [109.4° F.] for two hours; a crisis occurs before death, the temperature gradually falls, the nervous system seems powerless to generate any more heat, and finally death ensues. Chloralization previous to the artifical hyperpyrexia was found by the author to hasten and assure death. The effect of chloral on the nervous system is considered as that of a depressing agent, which is added to that of the hyperpyrexia. This fact, it is stated, must be of importance in medicine, for the use of chloral seems dangerous in delirium, insomnia, and in other accidents occurring in hyperpyretic patients.—*N. Y. Medical Journal.*

CONTINENCE AND SYPHILIS.—*The Lancet,* commenting editorially upon our remarks regarding continence as a preventive of syphilis, adds: "Though Dr. Gowers' testimony to the importance of chastity as a means of health is the last great note sounded to Englishmen, it does not stand alone in medical literature. There is another voice which may be recalled here which will sound for generations yet, as characteristic in its ethical strength as in its medical and scientific authority. Sir James Paget, in his clinical lectures, speaking of patients that expect us to prescribe fornication, says: 'I would just as soon prescribe theft or lying, or anything else that God has forbidden. If men will practice fornication or uncleanness, it must be of their own choice and on their sole responsibility........Chastity does no harm to mind or body; its discipline is excellent; marriage can be waited for; and among the many nervous and hypochondriacal patients who have talked to me about fornication, I have never heard one say he was better or happier after it; several have said they were worse; and many, having failed, have been made much worse."—*N. Y. Medical Record.*

BLEPHAROPLASTY.—Dr. C. Bolling reports an interesting case of an old man of 62, who had lost both upper eyelids and both eyebrows from epithelioma. The author took flaps of skin from the temples, and fastened them to what was left of the conjunctiva by sutures of catgut, inverting the flap so that the epithelial surface was in contact with the eye. He replaced the eyebrows by flaps taken from the forehead and from the integument between the brows, sewing them together by sutures of silk. The result was very satisfactory, the patient being able to open and close the lids, and presenting very little deformity.

RESECTION OF THE INFERIOR MAXILLA.—Dr. R. del Castillo-Quartiellerz has devised a plan for excising the inferior maxilla, which he thinks is a great improvement on the ordinary methods, both from a surgical and from an æsthetic point of view. The method consists essentially in passing a specially constructed trochar through the skin behind the ramus into the mouth, and then making use of the canula as a guide for a chain saw, by means of which the excision is carried out. This procedure has, of course, to be repeated on the opposite side. The only wounds of the skin are two small openings made by the trochar, the cicatrices of which are small and do not disfigure the patient; there is very little hemorrhage, and there being but a comparatively small wound, the amount of suppuration and consequently the risk of awakening the patient, is inconsiderable as compared with that occurring in more severe operations.—*Lancet.*

Quinine in Pregnancy.—The idea that full doses of quinine are liable to produce abortion seems to be no longer held. A writer to the *Br. Med. Jour.* says, "I have frequently, both at home and abroad, administered large doses of quinine (10 to 20 grains) to pregnant women suffering from malarial fevers, and never observed the uterus at all stimulated by it. I do not know of any drug that will cause, when taken internally, the expulsion of the contents of the pregnant uterus."

For Tape-worms in Children.—The *Lyon Med.* gives the following formulæ as effectual and agreeable:

I.

℞.—Oleoresin of aspidium,	ʒj to ʒijss.
Peppermint water,	f. ℥ss.
Essence of anise,	gtt. x.
Chamomile water,	f. ℥j.
Syrup of sugar,	f. ʒv.
Syrup of bitter orange-rind,	f. ʒv.

II.

℞.—Oleoresin of aspidium,	ʒj.
Calomel,	6 grains.
Sugar,	ʒij.
Gelatine,	q. s.

Make into the consistency of jelly, and administer as a confection.

Calomel and Digitalis in Ascites (in dropsy from hepatic cirrhosis).—Schwass (*Centralbl. f. klin Med.*) advises the use of calomel and digitalis as follows:

℞.—Calomel,	2 grains.
Digitalis,	¾ grain.—M.

S.—Every three hours for a week.

The diuretic action of this combination is far greater than that of either drug alone and can also be tolerated longer and better than either drug when taken by itself.

Prolonged Gestation.—Dr. Mans (*N. Y. Med. Jour.*) gives a case of prolonged gestation which he thinks can be authenticated. The period of pregnancy, calculating from the time of last menstruation, was 334 days. At the end of this time the patient bore a healthy male infant weighing nine pounds. This almost breaks the record, though Simpson mentions a case in which delivery occurred 336 days after mensuration ceased. Playfair places the extreme limit at 295 days.

For Tonsillitis.—Dr. John Aulde recommends (*Med. Reg.*) the following as a useful medicine and gargle in this troublesome complaint:

℞.—Tr. guaic. ammoniat., . . .
Tr. cinchonæ comp., . . āā f℥iv.
Potas. chloral., ... ʒij.
Mel. desp., ... f℥iv.
Pulv. acaciæ, ... q. s.
Aquam., . . . q. s. ad f℥iv.
M. Sig.—Use as a gargle, and take a teaspoonful every two hours.

Atropine in Hæmorrhage from the Lungs.—Dr. Stirling, says the *Therap. Gaz.*, relates a case in which hemorrhage from the apex of the left lung was entirely uncontrollable by ergotin, and all the other remedies usually prescribed. He administered $\frac{1}{150}$ grain of atropine, hypodermically, with the result that the bleeding was at once stopped. He found that when the drug was stopped the bleeding recommenced, to be controlled by a further use of the atropine.

Removal of Tubes and Ovaries for Pelvic Inflammation.—There are forms of pelvic inflammation which seem to defy almost all therapeutic measures, and Dr. B Bernard Brown, in considering this subject (*Maryland Medical Journal*), states that he operated in four cases which recovered. From a study of these he concludes: 1. That pelvic disease, accompanied by pain and inflammation, often occurs where neither tumor nor displacement exists to account for it, and where nothing more can be found than tenderness and thickening of the tubes. 2. That disease of the tubes is more common in married women or those who have had children or abortions. 3. That the ovary is more commonly affected in single women, and then it is frequently accompanied by defective development in the uterus. 4. That both of these conditions render the woman almost necessarily sterile. 5. That in removal of the tubes great care should be taken to remove them as close to the uterus as possible, so as to embrace the nerve trunk that enters the cornu of the uterus in the angle between the round ligament and the tube, which has been proved to have a powerful agency in the process of menstruation and in the formation of tubal and uterine epithelium.

DIFFICULTY IN DIAGNOSING PRESENTATIONS.—In a paper on Curious Complications of Parturition, by W. H. Borham, L. R. C. P., M. R. C. S. (*Lancet*), the author goes on to state that a *soft* and *dilatable* os, which the fingers are able to expand to the diameter of two inches and a half, is not a fully dilated os, and will not always admit of a digital examination sufficient to explore, and lead one to recognize a facial presentation. Young practitioners are often exceedingly embarrassed in diagnosing the true presentation of a child (especially in a condition of the os such as above stated, where it can be expanded only two inches and a half by the fingers), and where malformed heads, with swelling on the vertex, with the occipital bones divided, and large sulci between them exist. Such heads, although presenting naturally, are often mistaken for face presentation. Breech presentations are especially apt to be mistaken for such, and sometimes those of shoulder prævia have led one into the same error, and such cases do not reveal to the accoucheur the real state of things till the os has been *fully* dilated, and it is only then that certainty as to the presentation can be detected. A careful manipulation with a well-directed and tutored hand, by a skillful and sensitive touch upon the structures of the presenting parts, is needful to indicate in many occult cases the true presentation of a child when the mother is in labor.

THE ANIMAL SUTURE IN INTRA-VAGINAL PLASTIC SURGERY.—Dr. J. A. Ashby, of Baltimore, in a paper on this subject, presents the following conclusions:

1st. The catgut suture, properly prepared and selected, will be found sufficiently strong and durable for operations upon the cervix and perineum in the vast majority of cases.

2d. With careful manipulation it can be placed *in situ* with sufficient neatness and fit to secure perfect union of the denuded surfaces by primary intention.

3d. It is self-removable, and therefore does away with the necessity of further interference after union has been secured.

4th. It gives no distress while union is in progress.

5th. It makes the operation of trachelorrhapy and perineorrhapy during the same anæsthesia a very simple procedure.—*Maryland Medical Journal.*

Antiseptic Power of Salol.—At the meeting of the Hunterian Society, April 10, 1889. Mr. Corner introduced a series of cases illustrating the antiseptic power of salol (salicylate of phenol) as a dressing for wounds, after the part had been rendered aseptic by a 1 in 20 solution of carbolic acid. He did not claim for it greater power than iodoform, and probably other antiseptics, but it had advantage over some. It possesses a pleasant aromatic odor, can be used freely without fear of irritation or poisoning, is absorbent of moisture, which, drying, forms a hard but friable covering. It will prevent putrefaction; it will not destroy it when once established. It has been used in increasing frequency for several years at the Poplar Hospital, and with excellent results, in compound fractures and dislocations, also as a dressing in amputations, minor and major, and in compound, comminuted and depressed fractures of the skull. A case was shown of compound comminuted depressed fracture of the frontal bone, in which the bone was elevated and some spicules removed. Afterward the wound was washed with a solution of carbolic acid (1 in 20), the opening filled with salol, and a drainage tube inserted. The dressing was undisturbed for fourteen days, remained sweet, and the wound was healed on the twenty-sixth day. Other cases were exhibited, illustrating the good results of the salol treatment.—*Lancet*, May 4, 1889.

Sulphur Fumigation.—Fumigation by the burning of sulphur is the most common method employed by boards of health in the disinfection of apartments in which contagious disease has existed, and the clothing worn by the patients during their illness. In an address delivered by the distinguished chemist, Dr. E. R. Squibb, before the Kings County Medical Association, he called attention to the fact that there must always be an abundance of watery vapor in the room to be disinfected; otherwise the sulphurous-acid gas generated by the burning of the sulphur is not an efficient disinfectant. The same is true of chlorine gas when used for disinfecting purposes.—*Science*, April 12, 1889.

Iodoform in Burns and Scalds.—In the Moscow therapeutic weekly, *Novosti Terapii*, No. 10, 1889, p. 147, Dr. Afanasy S. Shtcherbakoff, of Rostov-on-Don, warmly recommends the local use of iodoform as an excellent and innocuous means for burns and scalds of any degree and kind, both in adults and children. He employs an ointment made of one drachm of iodoform to one ounce of white vaseline. Having freely spread the salve over a sufficiently large piece of iodoform gauze, he applies it to the part injured, covers the gauze with a layer of hygroscopic cotton wool, and fixes the dressing with a roller bandage. Having resorted to the treatment in a large number of cases, the author never yet observed any unpleasant accessory symptoms pointed out by Koenig, Winiwarter, etc. Hence, he emphatically suggests to give an extensive trial to the method, which, in addition to its bring effective and safe, is very simple and convenient.—*Provincial Med. Journ.*

SUPPRESSION OF URINE SEVEN DAYS IN A CHILD TWO YEARS OLD.—Dr. E. P. Benardy, in a paper read before the Obstetrical Society, Philadelphia, gave the details of an interesting case:

Was called in to see the child August 17, 1888. He had been ailing for a few days, and was suffering from nausea and vomiting; bowels loose; tongue clean, white and flabby; skin white; eyes dull; pulse quick, but no fever. Pepsin mixture was ordered. The next day stomach was irritable, and he could not retain anything on his stomach; pulse full and quick, but no fever; was informed that he had not passed urine for some time; ordered xx gtts. spt. æther nit. in warm water every hour or two. The following day condition about the same, but passed a quarter teaspoonful pure blood from the penis. Examination over region of bladder showed no indication of fluid. Ordered warm digitales and flaxseed poultice applied on region of kidneys—a bitart potassa mixture, with infusion digitalis internally. Next day showed no improvement, and twitchy movements of the hips and lower extremities were easily started.

On August 21, 22 and 23 the symptoms increased to an alarming extent, the skin being burning hot, and no urine being passed, close examination over bladder showing it to be empty. Six dry cups were applied over region of kidneys, and five hours afterward he passed a large quantity of clear urine.

August 25, all nervous symptoms abating, he passed urine of a light yellowish color, and a general improvement was manifest. This continued, and the patient was discharged cured, September 5, 1888.

The case was interesting on account of its rarity, even partial suppression of urine resulting in coma, convulsions and death.—*June American Medical Association.*

Case of Complete Stricture of the Uteri Before Twelve Years of Age.—W. W. Strange, M. D., was called to see Maud ——, aged eleven years and nine months, who was suffering with severe pain in right knee, with swelling of foot and leg. Under treatment, the swelling disappeared in a few days, but suddenly reappeared in the same leg, and a few hours later attacked the left ankle and knee, followed by swelling and sensitiveness. Rheumatism was suspected, as the pain began to appear in the wrists and forearm. After a few days' treatment she again got better, when she was taken with severe pains in lower part of abdomen, extending into the back. The pain resembled that at second stage of labor, but was more intense, causing her to rave, tear her hair and scream in agony. Morphine was administered hypodermically, with the effect of causing a decrease of pain until the fifth day. Upon raising her in a soothing position, would scream with pain, described as though a knife was run into her.

Digital examination revealed some swelling of the labia vulvae and vagina, with considerable soreness, and anæsthetics were necessary to reach to the os uteri. Supportive treatment and vaginal suppositories were used, but with little advantage, only to see her suffering with a worse paroxysm of pain than previously. Consultation was held and it was decided that, considering her age and the symptoms, it must be obstructed menstrual flow. The patient could now with difficulty retain any food or medicine, except small pills; she was anæsthetized, and a thorough examination was made, revealing an imperforate cervix. This was opened into uterine cavity and slightly dilated, causing the escape of about two ounces of decomposed blood and mucus. The flow continued about five days, changing to a muco-purulent discharge. She menstruated three weeks from time of operation with but little pain, but as she could not retain either food or medicine she continued in spite of treatment to lose strength, until death released her from further pain. The case was a very rare one, and of interest on account of the youth of the patient.—*Med Register.*

Complete Inversion of the Uterus.—Abrm. Livezey, A.M., M.D., Yardley, Pa., *Med. Register*, Nov. 24, 1888. Mrs. H., aged 25, mother of three children, was delivered while in a kneeling position, and remained in that position while trying to expel the placenta. A midwife attempted to assist her by traction upon the cord with one hand and pressure of the other hand on the abdomen. Feeling it coming down she encouraged the patient to make still greater effort, when the placenta was expelled with the uterus completely inverted. At this stage Dr. L. was called; there was no unusual hemorrhage. After the placenta was peeled off gently, an effort was made to replace it by making a cone of the three fingers and thumb and indenting the fundus in the usual manner. This produced considerable pain, and soon a constriction of the fibres of the virginal cervix or of the parts above arrested further progress. Rectal injections of infusion of lobelia, about one to two drachms to the pint of boiling water, was administered and ten gtt. fl. ext. gelsemium by mouth. After twenty minutes had elapsed, examination showed the parts soft and ready to yield. Gentle manipulation soon deposited the fundus in situ; the hips were elevated, ergot was administered, and with friction, both externally and internally, contraction soon occurred. Mild astringent injections, carbolized, were used, followed by tampons of marine lint, steeped in same, introduced per vaginam. The patient did well.

Book Notices.

A Reference Hand-book of the Medical Sciences: Embracing the Entire Range of Scientific and Practical Medicine and Allied Science by Various Writers. Illustrated by Chromo-lithographs and Fine Wood Engravings. Edited by Albert H. Buck, M. D. Volume VII. Quarto. Pp. 795. Cloth. New York: William Wood & Co.

The previous volumes of this work have been very fully noticed by us, so that to give a description of it in noticing the volume upon our table would be only to repeat.

The first article of this volume is on "Teratology;" the last article is on "Worms." Teratology, as our readers know, treats of the history, literature, embryology, classification and description of every deviation from the normal type of plants and animals. The popular terms are monsters and monstrosity, but these are objectionable on account of superstitious associations.

Until quite recently, as is known, the appearance and causes of malformations belonged to the mystic and frightful domain of witchcraft and demonology, but now they are conceded to be from natural or physical causes. Ambroise Paré, the father of French surgery and the most scientific surgeon of the period, in his work on surgery thus speaks of "monsters and prodigies:" "Therefore, in times past, there have been some who, nothing fearing the Deity, neither law nor themselves, that their soule have so abjected and prostrated themselves, that they have thought themselves nothing different from beasts; wherefore atheists, sodomites, outlaws, forgetful of their own excellency and divinity, and transformed by filthy lust, have not doubted to have filthy and abominable copulation with beasts. This so great, so horrid a crime, for whose expiation all the fires in the world are not sufficient, though they, too maliciously crafty, have concealed, and the conscious beasts could not utter, yet the generated misshapen issue hath abundantly spoken and declared, by the unspeakable power of God, the revenger and punisher of such impious and horrible actions. For of this various and promiscuous confusion of seedes of different kinde, monsters have beene generated and borne, who have beene partly men and partly beasts." Then follows a number of illustrations—"*effigies*"—exhibiting monsters; one, half man and half dog; another, man and goat; another, a pig with the head, face, hands and feet of a man. Paré, with others, it is stated, took the negative of the question that monsters were the result of the intercourse of devils with human beings. Says Paré: "It is much less credible that divells can copulate with women, for they are of an absolute spirituous nature, but blood and flesh are necessary for the generation of man. What naturall reason can allow that the incorporeall divells can love corporeall women? And how can we thinke that they can generate, who want the instruments of generation? How can they who neither eate nor drinke be said to swell with seed?"

Remarkable malformations among the lower animals were regarded as monsters portending dire calamities. Human monstrosities were considered as evidences of divine anger, or as the direct result of demoniacal influence, and hence were viewed with apprehension and dread, being interpreted by the augurs of the times as prodigies entailed upon parents as punishments; while in other cases they were to the general public wonders of bad omen.

The author of the article on Teratology is George Jackson Fisher, M.D., of New York. In discussing the causes of malformations he says that "nothing would seem to be more irrational than an attempt to explain the anomalies of organization which occur in the human fetus by maternal mental emotions and impressions, when it is an undisputed fact that there is not a malformation known which is peculiar to the human species; precisely corresponding malformations, in every respect identical in external configuration and in internal structure, occur among the lower orders, both in the wild and domesticated state—viviparous and oviparous. They are not rare among birds, and are also found among reptiles and fishes, in crustaceans and insects. Indeed, we may go still further, and find analogous malformations in the vegetable kingdom, where single and double monsters abound—developments which result from arrests as well as from defective or excessive formative energy."

To this volume of the Reference Hand-book there are over eighty contributors. We notice that Prof. Whittaker, of Cincinnati, contributes an interesting article on Worms. Prof. W. states that each segment of a tapeworm may contain as many as fifty-three thousand eggs, so that one producing as many as eight hundred ripe segments a year may furnish an annual contribution of forty-two million eggs; but myriads fail to find the necessary conditions of development. Undoubtedly the Professor, as evidenced by the numerous facts he mentions, has given much attention to the subject of worms.

A Treatise on Surgery: Its Principles and Practice. By T. Holmes, M.A., Cantab, Consulting Surgeon to St. George's Hospital, Member Associe De La Soc. De Chir. De Paris. With Four Hundred and Twenty-eight Illustrations. "Mille Neali Species." Fifth Edition. Edited by T. Pickering Pick, Surgeon to and Lecturer on Surgery at St. George's Hospital; Senior Surgeon Victoria Hospital for Children, etc. Large 8vo. Pp. 1007. Leather. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price: Cloth, $6.00; Leather, $7.00.

Holmes' Surgery is so well known to the profession of this country that it needs little in the way of description and commendation. The Surgeries of Gross, Erichsen, Ashhurst, Bryant and Holmes are works familiar to nearly every physician and surgeon of the United States, and are to be found in every medical college; and none are better known than the work of Mr. Holmes.

The first edition of Holmes' Surgery was published in England, we believe, in 1875. In the preface to it the author stated that it was his object that it should represent the condition of surgery of the time, as it was practiced in England; and that it should not be unworthy to rank with other excellent text-books in use in the schools.

That Mr. Holmes, in preparing a work on surgery, succeeded in his main object, namely, that it should represent the principles and practice of surgery as accepted and taught by the principal surgeons of England, this country, and the continent, is well attested by its having been so extensively adopted as a text-book. Subsequent editions, by the changes and additions made to them, as the unceasing researches of investigators developed new facts and modified previous views, have kept the work constantly abreast of the times, so that the fifth edition, which has just been issued, can be relied upon as setting forth the most recent developments in surgical lore.

In this edition the editor deemed it best to exclude the chapter on Diseases of the Eye, and to refer the student to the many excellent treatises on Ophthalmic Surgery which are now available. This omission was rendered the more necessary, as otherwise the additions and alterations which have been made in other sections would have largely increased the bulk of this work, which, without the chapter on Diseases of the Eye, somewhat exceeds in volume the last edition.

Amongst the subjects in which the former edition has required the most extensive emendation and alteration, the editor states, are inflammation, wounds and their treatment, tumors, diseases of the bones and joints, abdominal surgery and intestinal obstruction, and diseases of the breast. The operative treatment in reference to cerebral localization has also been discussed, as far as our present knowledge of the subject permits.

We have no doubt but that it will be the verdict of the profession that the fifth edition is as deserving of confidence as former editions have proved themselves to be.

Book on the Physician Himself and Things That Concern His Reputation and Success. By D. W. Cathell, M.D., Baltimore. The Ninth Edition. Revised and Enlarged. Large 8vo. Pp. 298. Cloth. Philadelphia: F. A. Davis. Cincinnati: Alfred Warren. Price, $2.00.

We have noticed several of the previous editions of this work, which has certainly met with great success, for it will be seen by the title-page that it has passed through nine editions.

The author very correctly observes in the first paragraph of the first chapter of the work that it is as necessary for the most skillful physician to possess a certain amount of professional tact and business sagacity, as it is for a ship to have a rudder. And then he proceeds to say that there are gentlemen in the ranks of the profession who are perfectly acquainted with the scientific aspects of medicine, and can tell you what to do for almost every ailment that afflicts humanity, who, nevertheless, after earnest trial, have never achieved either reputation or practice because they lack *professional tact and business sagacity;* and there is nothing more pitiful than to see a worthy physician deficient in these qualities, waiting year after year, until his hair turns gray, for a practice, and a consequent sphere of professional usefulness that never comes. Now it will give our readers an idea of the scope of the work by informing them that it has been the effort of the author in its preparation to instruct the young physician, who has just obtained his sheepskin and is anxious to obtain practice, what steps he must take in order to acquire *professional tact and business sagacity.*

We have known some physicians to secure large paying practices by seeming to take great interest in religious affairs—by being active in revivals, lecturing before Sunday-schools, attending religious gatherings and making addresses, etc. But we do not believe that Dr. Cathell, from our recollection of his instructions in previous editions of the work, endorses such methods. The *professional tact and business sagacity* that he recommends are of a higher order; for he says: "First, last, and in the midst of all, you should, as a man and a physician, always, and above all else, keep whatever is honest, whatever is true, whatever is just, and whatever is pure, foremost in your mind, and be governed by it."

We regret to say, however, that a great many differ with the author as regards the correctness of the sentiment expressed in this quotation.

But a work like Dr. Cathell's must be thoroughly read in order to do it justice in a review. We will, therefore, lay it aside at this time and take it up at a future time.

A MANUAL OF DISEASES OF THE EAR, FOR THE USE OF STUDENTS AND PRACTITIONERS OF MEDICINE. By Albert H. Buck, M.D., Clinical Professor of the Diseases of the Ear, in the College of Physicians and Surgeons, New York; Consulting Aural Surgeon, New York Eye and Ear Infirmary. 420 pages. Illustrated. Price, extra muslin, $2.50. New York: William Wood & Company.

The author states that since the publication of his work entitled "Diagnosis and Treatment of Ear Diseases," in 1880, he has been led by further experience to modify the views therein expressed and the methods of treatment there advocated, in some important respects. The present time, therefore, he says, seemed favorable for thoroughly revising the text and publishing it in a form adapted to the use as well of medical students as of practitioners of medicine. The manual now offered to the profession is the outcome of this effort. While a few chapters have been altered very little, others have been entirely rewritten, and considerable new matter has been added. The illustrations are also, in a majority of instances, different from those introduced in the earlier work.

In the present manual, as in the earlier treatise, he has made use of his case-books for supplying brief descriptions of actual instances observed in practice.

The work is an exhaustive treatise on diseases of the ear; and will well repay a thorough study by practitioners of medicine. It seems to us that the majority of physicians give no attention to ear affections; and the result is that when consulted by a party complaining of some disorder of one or both of the organs of hearing, after prescribing some astringent or anodyne injections and a course of blistering without relief, the patient is permitted to fall into the hands of some quack. This is not as it should be, nor is it as it would be if a work like Dr. Buck's was obtained and studied.

Editorial.

Accident Insurance Companies.—Accident insurance companies are of very modern origin. Not more than twenty-five years have elapsed, we believe, since we first heard of them. They number at this time very many, and, from all accounts, are doing a good work—doing a good work for poor laboring men, for professional men and for business men who are insured in them, and doing a good work—profitable work we mean—for those who own stock in them for the purpose of realizing dividends. They are probably not yet as popular as life insurance companies, for the community does not know as much about them, and, consequently, have not so many millions of dollars of stock invested in them, but they are rapidly catching up with those companies in popularity, and in a few years they will possess as many million dollars in capital as they now have hundreds. There can be no doubt in regard to this fact. It has been démonstrated that they "fill a want;" and for whatever there is a need, if the supplying of it holds out a prospect of profit, the need will not continue long.

Progress marks the present era. There has been a greater advance in the last hundred years in everything pertaining to the welfare of human beings than there was in the previous six thousand years of the world's history. Civilization and enlightenment during the last three-quarters of a century have made tremendous strides. The ocean is now crossed in less than six days, when fifty years ago the trip occupied six weeks or more. In a moment's time messages are sent thousands of miles. A few days ago we stood in our house and held conversation with a friend thirty miles away. We can mount a car and be in New York in twenty-four hours, distant eight hundred miles. Says the Bible in the third chapter of Genesis: "Behold, the man has become as one of us, to know good and evil; and now, lest he put forth his hand, and take also of the tree of life, and eat, and live forever: therefore the Lord God sent him forth from the garden of Eden, to till the ground from which he was taken"—(New Version). But within the last few weeks has it not seemed as if man, by his progress, had come upon the "tree of life" from which he had been driven with a curse, and would have it in his power to "put forth his hand" and pluck the fruit and eat and live forever. In this number of the MEDICAL NEWS is recorded the claim of Brown-Sequard of having discovered the "Elixir of Youth," an "elixir" which will restore to old men the youth they once enjoyed, which will revitalize and bring again into healthy activity functions that had long ceased to exist through the decay of old age.

A few years ago a laboring man, who depended upon his daily toil to make a living for himself and family, could see no alternative than for himself and for his wife and children to become objects of charity if he should, at any time, have been so unfortunate as to have met with an accident which disabled him for some time. Many laboring men, who had large families, could earn only from one dollar and a quarter to one dollar and a half a day. If one of these had fractured a limb or injured a knee, followed with inflammation, he expected to spend many weeks on his bed, suffering pain, and unable to earn anything. From whence then came the bread which he, his wife and his children needed? Of course it had to be furnished by charity, however humiliating it was to his sensitive feelings. Often in large cities, under such circumstances, the family would be temporarily broken up—the disabled husband and father sent to the hospital, the children sent to some children's home, while the wife and mother sought service in some laundry, or performed servile work in some other position. If, however, the family was kept together through the kindness of friends supplying their necessities from day to day, who remunerated the physician for his professional services rendered the injured man? Why, the doctor had to accept, as his reward, the consciousness of performing a noble act of charity to a suffering human being. Though with such pay he could not purchase anything in this world—not even a button, much less a coat—yet he was compelled to be satisfied with it, or, at least, seem to be satisfied with it.

But the progress of the age has not been limited to mechanical contrivances — to steamships, to destructive implements of war, to telephones, to telegraphs, and to discoveries in physiology, pathology, etc., but it has also included whatever pertains to the welfare and elevation of the human race—of families and human beings.

Individuals need no longer be harassed by the thought that if they were suddenly cut off they would leave large families unprovided for, to suffer the humiliations of poverty. At the present time nearly every man of family who is able to earn a trifle more than is necessary to meet the expenses of living, can so arrange that if he should die at any time his family will receive an amount of money which, if judiciously invested, will elevate them above the humiliations of charity. We refer to life insurance companies, which have been a great boon to those of very moderate means—to those who, while they live, can support their families very respectably, but would not be able to leave them anything in case death should take them away.

But to laboring men, and men of small means—book-keepers, young physicians, young attorneys, and hundreds of others, there are no organizations which deserve more to be regarded gratefully than Accident Insurance Companies. These institutions we consider as supplemental to Life Insurance Companies. The latter are a boon to a man's family after he is dead. The former are a boon, not only to one's family, but to himself while he is living, but has been disabled and not able to earn the means of living. The man who earns his living by his toil, if insured in an accident company, need not fear, if disabled by a fractured limb, that he and his family will become paupers, for he knows that the company in which he is insured is *legally bound* to pay him a weekly sum of money, which, in the case of a laboring man, is equal to the amount he earns when able to work. And to this indemnity money, as it is termed, he is as much entitled as he is to his wages, which he earns by the sweat of his brow. Such a person, too, can have the physician of his choice to attend upon him, because the prospects will be good of his being able to pay him.

We have thus spoken at length of accident insurance companies, for there is no class of persons more vitally interested in them than physicians. Physicians are naturally the conservators of the health and welfare of the community. The priests of the Roman Catholic Church are called fathers, for they are considered as having the care, not only of the spiritual welfare of their flocks but of all their interests, for the spiritual is regarded as running through, affecting and modifying everything pertaining to them. But can priests have more of a paternal care over their flocks than members of the medical profession exercise in respect to their clients and to the community. They explain the laws of health. They are consulted in regard to the construction of private and public buildings, in regard to the ventilation of dwellings, in regard to food and dress, labor and recreation. However much many may be disposed to belittle the medical profession, it is evident that no class of men exercise so powerful and wide-spread influence as members of the medical profession. Their knowledge involves nearly every interest of their fellow-men, for nearly every interest of men involves their health and physical welfare.

But some will say, How can there be any basis for insuring men in case of accidents, and, at the same time, an assurance exist that a reasonable return wlil be realized upon the capital invested. An accidental occurrence, they will say, is a *chance occurrence;* and in cases of chance there can be no regularity, no law—chance and law are diametrically opposed to one another. One implies confusion, the other order.

But as our knowledge of philosophy increases, resulting from the study of the actions of men, and the modifying influences of their environments, we perceive a regularity in all occurrences, and are compelled to renounce all belief in chance and adopt that which is termed "Necessary Connection." Take, for instance, suicide. As Mr. Buckle points out in his History of Civilization, there is no crime or act of men of which the commission seems to be more the result of accident than suicide. There is not a circumstance attending it, in every case that happens, that does not seem to be accidental. Nevertheless, we know from experience that every year there take place about the same number of suicides. But not only do a certain number of persons destroy themselves every year, but the instruments or means by which they do it are made use of in the same proportion. Each year a certain number suicide by taking poison; a certain number by hanging, etc. In London, the average number of suicides, each year, is about two hundred and forty. Says Buckle: "In a given state of society, a certain number of persons must put an end to their own life. This is the general law; and the special question as to who shall commit the crime depends, of course, upon special laws; which, however, in their total action, must obey the large social law to which they are all subordinate, and the power of the larger law is so irresistible, that neither the love of life nor the fear of another world can avail anything toward even checking its operation."

But we will elaborate the element of accident in Accident

Insurance Companies more fully at another time; and also demonstrate how they should be managed in order to fulfill their purposes—benefiting those who insure in them and realizing satisfactory returns to those who have invested their money in them. We will show, too, the interest which medical men should take in them.

ASSASSINATION OF DR. A. E. JONES.—The community comprising the city of Cincinnati and Hamilton County, and we add, of nearly the whole State of Ohio, was never so shocked as it was by the assassination of Dr. A. E. Jones. There was not a man so generally known personally throughout Hamilton County as he was. Of the over 40,000 residents of Walnut Hills, there was scarcely a man, woman or child who did not know him by sight. Consequently when it became known that he had been brutally murdered and robbed by a negro brute whom he had employed as a servant, in open daylight, in his own yard, only a few feet from his own door, the whole city and county was shocked as never before.

The following sketch of Dr. Jones, prepared by an acquaintance familiar with his history, we publish with pleasure:

Col. Jones was a man of marked individuality. Contact with him never failed to impress one with the fact that he was beyond the average in intelligence. As a physician he ranked high among his professional brethren, and by his patients, who loved him, he was held in the highest esteem. His manners and bearing in the sick chamber were fatherly, cordial and reassuring. His cheery, hopeful voice and sympathetic tenderness oftentimes had as much to do with the recovery of a patient as the medicine administered.

The deceased was a vigorous lover of his country, and it was a favorite expression of his that he was in the military service in different capacities for nearly a half century. During the War of the Rebellion his services as provost-marshal of Cincinnati at the time of the greatest excitement here were of great value, for which he not only received the thanks of the community, but flattering testimonials from the headquarters of the army. Since 1865 he had been connected with different military organizations, notably the 1st Regiment as surgeon, which position he held until appointed Surgeon-General on the staff of Governor Foraker, a place that suited his tastes and inclinations, and which he ably filled. He was regarded as the most efficient surgeon-in-chief ever appointed in the Ohio National Guard.

This city is indebted to Col. Jones more than to any other man in the State for its possession of Eden Park as a breathing place for the masses. While a member of the City Council, years ago, this was his especial hobby, and he fought his battle to a successful termination against the most tremendous odds encountered at the outset. His energy and perseverance were his strong points, and in no event of his life were these qualities better illustrated than by his course in the park project. He was opposed not only by the most of the populace, but was made the target of ridicule and censure by the public press. But he won, and to-day the citizens of Cincinnati are reaping the benefit of his wise foresight. In Grand Army matters the deceased took a most enthusiastic part, and no matter what the occasion was in his post, Col. Jones was generally present to make a talk to the "old boys." The post to which he belonged was named in honor of his brother, who was killed at the head of his regiment at the battle of Chickamauga. The old man was tenderly attached to this brother, and upon a recent occasion, when Surgeon Ellis, of the 1st Regiment, delivered a eulogy on the life and character of the dead soldier to the comrades of the organization that bears his name, the tears fell like rain upon the cheeks of the survivor. He never could thank Dr. Ellis sufficiently for his his words of praise.

RESOLUTIONS BY THE PROFESSION.

A meeting of the medical profession was called July 29 to take action on the decease of Dr. Jones. A large number of the oldest and most prominent members of the profession were present. The following preamble and resolutions were adopted:

"The medical profession of Cincinnati, deeply affected by the tragic circumstances connected with the death of Dr. A. E. Jones, have assembled to day for the purpose of expressing their sorrow at the assassination, and at the same time their high appreciation of his professional worth and admiration for his great public spirit in all questions involving the preservation of the historical data of our city, the growth and improvement, and the memories of the distinguished men whose lives have been connected with this portion of the Ohio Valley.

"The career of Dr. Jones is especially eminent in his patriotic efforts on every occasion which involved the honor and maintenance of the integrity of the Nation, and in the many important positions which he held as an officer of the United States Army and Ohio National Guards, in which he has always displayed great activity, efficiency, and public virtue. In the fulfillment of his professional and public duties he has been one of the most widely known and respected of our citizens; and though he had reached the period of long life, yet his vigor and capacity showed no sign of abatement, and he still possessed "a heart of youth in a frame of age."

"*Resolved,* That the medical profession of Cincinnati have ever regarded Dr. A. E. Jones as an intelligent, prudent, and conscientious practitioner of medicine; that he was unremitting in his care of the sick, and that the lowliest as well as the highest, socially, in the area of his practice found in him a faithful physician and unwavering friend.

"*Resolved,* That we offer to his stricken family the assurance of our profound grief and compassion in their bereavement.

"C. G. COMEGYS,
"J. H. TATE,
"J. C. CULBERTSON."

THE NEW REJUVENATOR.—Our readers have heard through the newspapers, no doubt, of "*Brown-Sequard's Elixir of Youth,*" "*Elixir of Life,*" etc., and know that it is meant by it the inspissated juice of the procreative glands of one of the lower animals, as the guinea pig, rabbit, dog or sheep, which has been prepared for injecting, by means of a hypodermic syringe, beneath the skin of a human being in whom have become weakened or lost several of the vital functions or powers by the decay of age.

A few weeks ago Brown-Sequard, the distinguished French physiologist, announced to the French Academy of Medicine that he had found, by actual experiment, if the spermatic fluid of a young and vigorous dog, recently killed, was injected by means of a hypodermic syringe beneath the skin of an old, enfeebled man who had suffered decay of those vital functions which are impaired by age, they would be largely restored. He stated he had tried the experiment upon himself and had experienced its rejuvenating influence. He announced his so-called discovery with all the earnestness that he ever employed in announcing any of the great discoveries that he ever made, the validity of which he firmly believed.

That an individual whose vital functions have been impaired or lost by age can be rejuvenated seems both preposterous and ludicrous, consequently it is the expression of many that Brown-Sequard's claim is the result of dotage; that his mind having become weakened by age, his feeling a stimulation of impaired functions was the result merely of mental suggestion.

The *British Medical Journal*, of July 6, says that the extraordinary statements made by Brown-Sequard, as to the efficiency of hypodermic injections of fluid expressed from the testicles of young animals, in senile debility, have been to a certain extent confirmed by M. Variot, who made a communication to the *Societe de Biologie* in June. The patients chosen were debilitated men, aged 54, 56, and 68 years respectively, and they were not informed of the nature of the treatment adopted. In all three cases the injections were followed by general nervous excitement, increased muscular power, and stimulation and regulation of digestion. M. Brown-Sequard said that M. Variot's observations disposed of the objection that the results he had observed in himself were due to "suggestion."

The communication of M. Variot will tend to continue, and probably heighten, the interest excited by Brown-Sequard's first announcement; but, as stated by an American editor, it can not, however, be taken as a very strong confirmation of his claims, or of his hopes. There is no reason whatsoever why such results as Brown-Sequard thinks he observed in his own person should be looked upon as the natural effect of hypodermic injections of a mixture of water and the albuminoid constituents or cell-elements of the testicles of animals of any species. But, as is stated, experiments of a sort like those of Brown-Sequard may be looked for over the world now; and it would be a great thing, says the American editor to whom we alluded, if the ancient male occupants of all our alms-houses could really be transformed into young, vigorous and industrious men. "It is to be hoped, however, that the experimenters will not neglect to be careful in the selection of the animals from which they secure their inoculation material and in regard to the dose used in each case."

But we would like to hear reports of experiments, not upon *aged men* of 54 and 56 years, but upon men who have attained to the age of 70, 75 and 80 years. We are well acquainted with an old gentleman, of Cincinnati, aged over 86 years. He walks the streets of the city with as great rapidity and comfort to himself as most young men of only 25 years of age. Of course, age has weakened and perhaps entirely extinguished the functions of some of the organs of his body. We wish some one would inject the "testicular juice" of some lower animal beneath his skin and report the result. We would like to ascertain the effects of such an injection in *rejuvenating* some of his disabled powers. We have also in our mind an old gentleman, whom we frequently meet on the streets, who was born about the year 1797. We consider that he would be an excellent subject on whom to try the effects of "inspissated spermatic fluid." What functions of his body are impaired can be fairly regarded as having been impaired by age; but a man who is only 54 or 56 years old is but a middle-aged man. If any of his functions are weakened, they have been rendered so by overuse or by disease, and not by age.

Ex-Surgeon-General Wm. A. Hammond, now of Washington, formerly of New York, has been making experiments for the purpose of testing the validity of Brown-Sequard's physiological discovery. For the edification of our readers we will make some extracts from a report of an interview with him published in a recent number of the *New York Press*.

A man sixty-five years of age, who had been incessantly engaged in mercantile pursuits all his life, and was generally run down and decrepit, had called at Dr. Hammond's Sanitarium in quest of a cure for his infirmities. This case he was proposing to treat in accordance with the French physiologist's method. The Doctor's first subject was 60 years old, and had performed both manual and mental labor.

"I asked Dr. Hammond to-night to explain to me in a detailed and accurate and yet a popular way just how he had treated the first subject. So many absurd accounts had been circulated, that nothing could really be known about his exact method. He dictated this, the first authorized statement yet made with regard to his experiments:

"When the first accounts of the 'elixir of life' were received in this country," said he, "I was very much disposed to doubt the efficacy of any such means, because, as

I read the matter, Dr. Brown-Sequard used the juices of various glands, such as the liver, the spleen, the pancreas, etc., but when I got the full details in the *French Medical Journal*, I found that his experiments were restricted to the use of the inspissated juice of the procreative glands of guinea pigs and rabbits, and, I think, in one case, of a dog. I at once inferred that the reason why the guinea pig and the rabbit had been used was because they had been handy in the Doctor's laboratory.

"I thought I saw an objection to using the procreative gland of a guinea pig or a dog—that the one remarkable thing about the guinea pig was that it is timid, and that the dog is not carnivorous and not edible. I at once concluded that the corresponding glands in the sheep were far preferable for such experiments as I designed to perform.

"I therefore procured the procreative glands of a sheep, cut them in small bits, ground them in a mortar, mixed the mass with a small quantity of water, and then filtered the mixture through pure Swedish filtering paper, the purest of all that is made. I thus obtained a clear, opalescent fluid.

"I injected thirty minims of this into the arm of a man a little over sixty years of age, having previously injected a quantity of it under my own skin simply to show that it was nothing injurious. It is a rule of mine to perform all of my own experiments upon myself first."

Dr. Hammond turned up the sleeve of his dark alpaca coat and the wristband of his buff-colored flannel shirt to show that there was no mark even where the injection had been made.

"Well," he continued, "I put this fluid under the skin of this old man. He received the injection about eight o'clock in the evening. No ill consequences ensued. He said the next day that he had become free from a rheumatic pain that he had had in his left arm for over a year.

"He had been unable to button his shirt collar or to use his arm freely in any way, even to scratch the back of his head or to stroke his back hair, until the day he recovered the free use of that arm."

"Did it stay cured?" was asked.

"Yes," the Doctor replied, "it staid cured. I saw him not an hour ago. He has had three injections altogether. He tells me that his power for work has been much increased, and his labor is of such a character as to require the use of the mind as well as the body.

"He adds that he has noticed a buoyancy of spirit that he has not enjoyed for fifteen years, and that he has recovered certain functions that he had supposed he lost fifteen years before. His vitality he was sure had increased in every respect.

"Knowing so well," Dr. Hammond went on, "that the principle of suggestion is such a powerful influence with almost all persons, I hesitate to give an unqualified acceptance to what appeared to be the outcome of the experiments. It requires a number of observations before I can accept the results as absolutely reliable, and I am now about to extend the experiment very considerably."

Since writing the above we have seen the report of some experiments by Dr. H. C. Brainard, of Cleveland, O. One of his cases was a very feeble, decrepid man about seventy years of age. In order that there might not be any possibility of mental influence in connection with his experiment, he did not let his patient know what he was about to do to [illegible] He found the old man in bed. His legs were not [illegible]an the Doctor's arms. After prescribing for him as usual, he got out his hypodermic syringe and injected about a drachm of elixir into the old man's arm. The next day, the Doctor asserts, the old patient walked a distance of two miles and back—four miles in all—and then came to his office and said that he felt younger and better than he had for twenty years. Dr. Brainard stated that he was still as lively as a boy, but he did not know how long it would last—that Dr. Brown-Sequard announces that the effects wear off in about a month.

Dr. Brainard, we understand, reports that he had used the elixir on several other patients with precisely the same results. He is now trying it on a man who has a spinal disease that affects his locomotion. We have not heard whether it is locomotor ataxia or not.

GLYCERINE IN CONSTIPATION.—The glycerine treatment of constipation, enemata of from forty to fifty grains being used, has been tried by L. Norotny in two hundred cases, representing the most varied forms of disease. In almost all defecation took place after one or two minutes, but in four or five cases from two to three hours elapsed before the effect occurred. No unpleasant action was observed. In about one-third of the cases there was first a solid movement, followed in an hour by a second that was soft as liquid. Reisinger also reports satisfactory results from the treatment. As an improvement upon the enema, Messrs. Eli Lilly & Co., of Indianapolis, have prepared a suppository containing 95 per cent. pure glycerine, which are permanent, convenient and effective.

We mentioned in a previous number of the MEDICAL NEWS that when glycerine is used as an injection in quantity of about a teaspoonful in the rectum, it will speedily cause a movement in the bowels. We understand that the remedy originated in Holland, with a physician who, instead of making it known to the medical profession through the medical journals, introduced it in the way of a proprietary article, advertising it as a remedy for constipation. An analysis revealed the presence of glycerine with a minute quantity of conium and a salt of sodium. These additions do not seem to be necessary, as the glycerine alone secures invariably a prompt action of the bowels. This action, as has been explained in the MEDICAL NEWS, is probably due to the fact that glycerine has a strong affinity for water and attracts it from the mucous membrane of the rectum, causing irritation of the sentient nerves; this leads to peristaltic contractions, promptly producing the effect of relieving the bowels.

A REMARKABLE CASE OF HYSTERIA.—Dr. Corning, in a little work upon hysteria, mentions a woman who suffered with hysteria, who, a number of times, cut one of her arms below the elbow and stuck pieces of glass and other articles into the wound. The following articles were removed from wounds in her arms: ninety-four pieces of glass, thirty-four splinters, two tacks, four shoe nails, one pin, one needle. Several pieces of glass, and the pins and needles first removed were mislaid and lost. Including these, the whole number of objects removed amounted to one hundred and fifty. The largest splinter was nearly six inches long. It is stated that she apparently experienced acute erotic pleasure from the probings to which she was subjected. She was subject to frequent attacks of choking, suffered with globus hystericus, and imagined at one time that she had a spool in her throat, and could only swallow through the hole in the middle.

Dr. Corning alludes to the accusations of a number of women, soon after the introduction of anesthetics, that they had been outraged while under the influence of chloroform or ether in the office of a physician or dentist. When these charges were first made gross injustice was frequently done the accused, as both judge and jury were but too liable to lend undue credence to the women declaring themselves aggrieved. A case is related of a married woman who went to the office of a dentist to have her teeth operated upon. Chloroform was administered to her, but, although she inhaled it for over an hour, she was not brought fully under the influence of it. A lady friend accompanied her to the dentist's office, who had occasion to leave the room for fifteen minutes at one time while she was partially anesthetized. When she returned home she complained to her husband that the dentist had criminally assaulted her during the time that the lady friend who was with her had retired from the room. The friend testified that when she returned into the room she had found her precisely in the same position in the chair which she occupied when she went out of the room. The dentist was arrested and was imprisoned in jail for two months before he was tried. When the case came to trial he was honorably acquitted by the jury. Mr. Justice Hawkins [the English judge] congratulated the accused upon having had an opportunity of fully vindicating himself upon the charge preferred, and at the same time he asserted that such a verdict would not be the slightest imputation upon the absolute sincerity of the prosecutrix, who, no doubt, firmly believed every word of what she had said.

In this case a number of medical witnesses related instances in which females undergoing operations at the hands of dentists or surgeons had alleged that they had been criminally assaulted, persisting in this belief, in some cases, for years afterward.

After a number of criminal suits of the kind had been brought against surgeons and dentists—the latter, however, were more frequently charged—it became evident to courts and jurors alike that the women who made these accusations had either labored under some unusual mental aberration, incident to the inhalation of the anesthetic, or were the victims of some form of neurosis. It was natural, under the circumstances, says Dr. Corning, that the thoughts of medical witnesses should revert to hysteria; and, accordingly, at the present day the connection of this insidious affection with many cases of this kind has been clearly made out.

THE CINCINNATI MEDICAL NEWS.

VOL. XXII. No. 260. Old Series. AUGUST, 1889. VOL. XVIII. No. 8. New Series.

Original Contributions.

Sanitation.

BY R. R. HOPKINS, M. D., RICHMOND, IND.

[*Continued from February number Cincinnati Medical News.*]

In the continuation of this subject we will direct our attention to the country and small village more than to town or city, as our boards of health in towns and cities are doing a noble work. The country and small villages appear to be neglected. The country physician is often asked many questions in regard to many points that should be well understood before he answers. The construction of a house and its location are of vital importance to its occupants, both as to the health of the family and its valuation after its completion. A $5,000 property, badly located and arranged sanitarily, would not be worth as much as a $2,000 property, well located and well arranged sanitarily. Boards of health can do much, in the cities and towns; physicians can do much in villages and country places.

Every physician should, to the families under his care, point out the penalties of violations of the laws of health. Take so simple a matter as ventilation, so far as my obsertion goes, of the school-room, factory, church or public hall, to say nothing of private dwellings. In these buildings it is the rare exception for the principles of ventilation to be adequately applied. As there has been so much said on the ventilation of houses, as well as the arrangements to give so much air to each individual, we will briefly talk on the subject of location and the surroundings.

Where shall I build? Upon the wise decision of this important inquiry depends, to a greater or less extent, the health, the consequent happiness, and eventual success in life of every countryman or townsman. It has been the experience of tens of thousands who began life hopefully, and who went to work with willing hands and brave hearts, to build a residence, to "clear" a farm, and make a home for life for themselves and families. They did well until sickness came, under which their strength and energy wilted away like a flower without water. They fell behind hand, lost their energy, ran in debt, and, finally, settled down in the poor ambition of only meeting their expenses from month to month, their idea of getting ahead having been abandoned forever. It is demonstrably true that the difference of a few hundred yards—of a dozen rods sometimes—in locating a dwelling for a family, is precisely the difference between its extinction in a few years by disease, and its prosperity, its health, and a large increase of industrious, manly sons, and of refined, educated and notable daughters. I now have in my mind a party who purchased a beautiful building site for a country residence. After spending two years and a large amount of money in preparing it for the reception of his wife and children, he moved into it. Everybody was delighted at the "prospect" which it afforded of river, and field, and woodlands, and distant mountains. With autumn came chills and fever, malaria with its many sequelæ. He finally had to abandon it, and never occupied it afterward. I knew a large business firm in one of our nice cities, to erect a private residence in the country at an expense of over thirty-five thousand dollars. It could be seen for many miles around; while its spacious piazzas afforded near and distant views which delighted every visitor. During the very first year such a deadly pestilence broke out among the inmates that it was at once abandoned, and was eventually sold for a song. A wealthy and retired citizen of one of our fine cities in Northern Ohio built for himself a splendid mansion, to retire from business, about four years ago, anticipating that it would be his home for life. He had occupied it but a short time when one by one the members of his family were taken sick. A strict examination discovered the fact that the house had been erected over a "filling," the emanations from which, constantly ascending, impregnated every room in the building with deleterious gases. It had to be abandoned. We find that the hospitals and barracks in and near Bengal are now almost useless, having been built in a locality utterly unfitted for human habitations, as far as health is concerned. Their erection cost the British Government sixty-five millions of dollars. This great waste of money might have been altogether avoided by the application of the sanitary knowledge of the cause of disease. We see further in the history on this subject from the official papers presented to the British Government. It is shown that of each hundred British soldiers in India, ninety-four disappear from the ranks before the age of thirty-five years. It is also shown that the average standard of health of Europeans in India would compare with that existing anywhere else in the civilized world, if the known causes of disease were dried up. It is admitted that in forty-five years one hundred thousand men might have been saved, if proper localities had been chosen for their dwellings. We could mention many locations in our own country, from official papers, but as the subject, in the manner that we now present it, will be understood, we will progress. It is undoubtedly true that the difference of a few feet in the locality of two buildings is the difference sometimes between life and death. These things being so, it is a matter of personal happiness and pecuniary interest to every person who contemplates building a house, which is to be a home for himself and family probably as long as they live, that he possess such information as will enable him to ascertain certainly why certain localities are so prejudicial to the health of families residing therein ; or, in other words, what is the agent which causes disease in this mysterious manner? It may seem discouraging at first view, to state that this destructive agency is as invisible as the viewless wind. At the same time it will afford encouragement to be assured that its nature is known, as also some of the laws by which it is regulated, and that by an easy attention to them the Samson may be shorn of his locks, and the great destroyer may either be avoided or rendered as harmless as the gentlest touch of infancy. The name of this remorseless destroyer of human life is Miasm. It is derived from a Greek word which means emanation, that arising from, because it comes up from the surface of the earth. It is a short word, but it brings weary sickness and agonizing death to hundreds of thousands every year. It will bring sickness and death sooner or later. When once contracted, organic changes will be produced by it, but it is a sickness and death which could have been avoided. Miasm is both animal and vegetable in origin. Rome has forgotten to study the laws of sanitation. Rome, which in ancient times was uninhabitable for two months in every year, is more noted for malignant intermittents than it was in the time of the Republic. From the Pontine Marshes fifty miles south of the city, to the Tiber, the intensity of the malaria has been long increasing. For two hundred years the malaria has resisted all the resources of science; and has held possession of the Palatine Hill, the Circus Maximus, the Forum, and nearly the whole of the ancient city. It has outlived the throne of the Cæsars, and the iron crown of the Lombards, claims joint sovereignty in the Vatican, and promises well to outlive the Eternal City. This mysterious agency, which in ancient ages was regard as a demon of darkness, continues to be developed under all the conditions that could bring it into being three thousand years ago; and it has nowhere been destroyed, except in small territories that have happened to come under a higher civilization, where sanitary laws have been enforced or paid attention to. In the United States it is seen annually in all the Territories between the Gulf of Mexico and the Rio Grande and the forty-fourth degree of north latitude. South of thirty-three degrees it extends from the mountains to the Atlantic Ocean; farther north it is less known east of the Alleghenies. In the Southwest it is found in all the valleys on both sides of the Cordilleras of Mexico. In the northern part of the United States malarious diseases exist on all the fertile plains and forests of the Mississippi Valley, and on all the tributaries of the Missouri as far west as the western parts of Dakota, Nebraska, and the middle of Colorado, six hundred miles above St. Louis. As we have said before, this poison can be kept in subjection where its causes are always being generated, and in many sections entirely eradicated. It is within the memory of the present generation that, some forty years ago or more, the city of Louisville, in Kentucky, was one of the most pestilential spots in the habitable West; but, by a wise system of filling and drainage, it is now one of the healthiest, as well as one of the most beautiful cities of the great valley.

Heat and moisture are essential to the production of malaria in any locality. It can not exist where there is severe frost or great dryness. As it is known the world over that miasm never exists in deserts, where there is nothing but dry sand and a burning heat, it is clear that something more than heat is necessary to cause miasm; but it is further known that when miasm is so malignant in localities where it is certain death to sleep on shore for a single night, a man can go a mile and sleep on shipboard and keep in perfect health. This shows that something more than heat and moisture are necessary for the production of miasm. The third element is vegetation—anything that grows from the earth in the nature of grass, leaves, or wood. Then heat and moisture and decaying vegetable matter, when these elements exist together for a considerable time, produce destructive decay of the vegetation, which requires a degree of heat exceeding eighty degrees Fahrenheit. These three elements will always produce miasm, whether out of doors under the influence of the heat of the sun, or on shipboard, or in an uncleanly kitchen by the heat of stoves or fireplaces. Then if a house is built over a filling there will be sickness in this household. If it is built on bottom lands, made lands, where running streams have in the course of years been depositing decaying and dead leaves, mud, or animal or vegetable matter, the occupants will certainly have various diseases, unless a system of thorough and constant draining is put in operation. Ponds, sluggish streams, or any accumulations of water in productive soil, always yield miasm, and a dwelling in their vicinity will be certainly visited with miasmatic diseases, unless attention is paid to certain circumstances which may modify the result. Miasm is not supposed to pass a swift running stream; hence, if a stream runs through a farm, and one bank of it is level and rich, the other higher and rolling, better to build on the latter, for then the miasm of the flat land can not cross the stream to the house. If there is no stream, but a pond or flat land, and the house must be built in the vicinity, build it so that the prevailing winds from June to October shall blow from the house toward the pond or flat land, for miasm, being a gas or air, is carried before the wind.

It is a hazardous experiment to build on an eminence, if it gradually slopes to the water's edge, or to a low, flat piece of ground, unless there is a growth of trees or other shrubbery intervening, because miasm, like the clouds, will sometimes "roll up" the side of a hill or mountain. It is known that vigorous growing bushes, or hedges or trees, between a miasm, producing locality and a dwelling, antagonize the miasmatic influences, the living leaves seeming to absorb and feed upon the miasm; but there should be a space of fifty yards, at least, between the hedge and the house, and the thicker and broader and higher the hedge the better, and the nearer the leaves are to the ground the better; for the miasm gropes on the surface in its greatest malignity, and is seldom concentrated enough at the height of ten feet to be materially hurtful to man, unless it comes up a slope. Hence, in the old cities of the world, in the times of plagues and pestilences, the people who could not "go to the country" had a custom among them to live in the upper stories of their dwellings while the sickness raged. They would not come down-stairs to obtain marketing, but would let down baskets by ropes to the country people for the provisions they had to sell. But they failed to discover why the country people could come to town with impunity, while they themselves were safe from disease in proportion as they lived in the upper stories of their dwellings; but a law of miasm has since been determined which beautifully unravels the mystery. Miasm is condensed by cold, made heavy, and falls to the earth, hovering, as it were, within a foot of its surface; hence is not breathed, unless a man sleeps on the ground. On the other hand, heat so rarefies miasm as to make it comparatively innocuous; hence the coolness of the early morning and of sundown throw the miasm to the surface by condensing or concentrating it, and thus making it heavy; while the heat of the day of a summer's sun so rarefied and lightened the miasm as to send it upward to the clouds. The country people came to the town in the daytime, after sunrise, after the air had become heated by the sun's rays, and went home before it became chilled by the evening shadows. Hence it is better for the people who live in a district infested by malarial influences, either from vegetable or animal causes, whether in town, city, or country places, to sleep in the upper stories of their dwellings from June till October. In this connection it is practically useful to know that the most malignant agencies of nature may be rendered harmless by a little observation and the wise use of a little knowledge. Miasm is most pernicious about sunset and sunrise, because the cooling of the atmosphere at the close of day causes it to become condensed above, to become heavy and fall to the earth where it is breathed, while after sundown it has settled so near the earth as to be below the mouth and nostrils—hence it is not breathed. When the sun begins to rise in the morning the miasm begins to warm and to ascend, but after breakfast it is so high as to be above the point at which it can be breathed; and besides, is so rarefied, so attenuated, as to be innocuous. Therefore, the great practical truth beautifully follows, that miasm exerts its most baleful influence on the human health about sunrise and sunset; hence, of all the hours of the twenty-four, these are the most hurtful in which to be out of doors, and, for the same reason, the hours of midday and midnight are the most healthful in miasmatic sections, either in town, city or country. But, unfortunately, the cool of the early morning and the late afternoon are the most pleasant times in the twenty-four hours for labor. There is, however, an almost infallible prevention of any ill effects arising from such an exposure to miasm about sunrise and sunset, and that is easy of practical application under almost any ordinary circumstances. It ought to be made known and repeated millions of times through the public prints every year, until the information has reached everybody's dwelling in all malarious sections. The people may exempt themselves almost altogether from the whole cause of malarial diseases, such as diarrhœas, dysenteries, chills and fevers, either intermittent, remittent, from the mildest to the most malignant character, by eating a hearty and warm breakfast before they go out of doors in the morning, and by taking supper just before sundown. The philosophy of the matter is that a hot or hearty meal so excites the circulation, and so invigorates the whole frame, that it acquires the power of resisting the disease, preventing the influence of miasm. A neglect of such a simple precaution, in certain districts where malaria is known to exist in a concentrated form, is a cause of death so common as to be known and guarded against by everybody.

Multitudes of laborers, we are informed, around the city of Rome, who have been employed during the day in the low, level, damp fields near the city, come into town about sundown, and sleep on the streets and on the steps and stoops of houses, in order to avoid the sickly atmosphere of the evening in the "marshes." No less a personage than a young king lost his life within a few years under the following circumstances: Having to pass the night in one of his journeys at a house located in the midst of an extensive lowland or marsh, and wishing to be on horseback early in the morning for a hunt, the landlord pressed upon him the danger of being out early, and that, at least, he should take his breakfast first. The impatient youth was observed early next morning sitting at his open window, enjoying, as he thought, the delightful air, as it blew upon him, and soon after ordered his horses. He became ill and died of a fever in a few days.

There is another great remedy against miasmatic diseases for those families who feel themselves compelled to live in a house exposed to miasm. It was stated a while ago that heat so rarefied miasm as to render it innocuous. No family can be troubled with fever and ague or malarious attacks from a vegetable origin in any locality where that disease prevails, if from June to October a brisk fire is kindled in the family room, to burn for an hour about sunrise and sunset, and the family are required to repair to that room morning and evening, and remain there at least until they get their breakfast in the morning, and in the evening, about sunset or during twilight, have a little fire in the sitting-room after supper. Health would be promoted and important social benefits would accrue to country neighborhoods, as well as towns and cities, if two or three nights of every week after tea were spent in friendly visiting, thus encouraging social association, which diffuses intelligence, promotes kindly feeling, enlarges the views, expands the ideas, and elevates the whole character, breaks down selfishness and elevates humanity, and, consequently is a nice, gentle stimulant to a careworn and tired tissue. It promotes health and longevity.

All habits of life which invigorate and promote health, are important; on the other hand, avoid all depressing passions. Fear, grief and anxiety cause the blood to recede from the surface, producing ashy paleness of the skin. Avoid over-indulgence in food of any kind, over-distension of the alimentary canal; breathe good air, free from malaria or other poisonous matter, and, in our houses look well to ventilation, avoid dampness and all malarial influences. Sunlight, properly administered, as well as air, is better than ointments. They are fine tonics, the best nervines known. These elements are a source of life, joy, health and strength. The more we avail ourselves of their blessing, the less occasion we have for the physician's counsel, and much suffering is saved.

Permit us to dwell for a short time on some of the theories of malaria. For a fine article on this subject by W. R. Amick, M.D., refer to CINCINNATI MEDICAL NEWS, April number, 1883, page 217. We have writers that have denied the existence of malaria entirely. We know it is easier to destroy than it is to construct, and although "the youth who fired the Ephesian dome" is said to have outlived in fame "the pious fool who reared it," those days are past, and in these more matter-of-fact times, it is he who builds, rather than he who either destroys or clears away the rubbish, that is held in remembrance. Therefore, to annihilate malaria an hypothesis which will explain certain phenomena, as satisfactorily as malaria does—Lancisci's creation—will live in the minds of the profession, whether or not it has an existence outside of those minds. The advocates of this theory attribute all the symptoms of fever and ague, yellow fever, and all other diseases endemic in their nature, to gangliosthenic, or to an exhausted condition of the nervous centers which preside over organic life; but what causes gangliosthenia? The symptoms in typhoid fever are due to cardiac exhaustion and to ulceration of Peyer's patches; but what causes this exhaustion and ulceration? In purpura the symptoms are due to the extravasation of blood; but why does this extravasation ensue? We might go through the whole catalogue of the diseases subject to this theory, and argue in the same strain; and until the hypothesis makes those points clear we shall regard it as valueless. Nothing new is commendable unless it can be proved to be better than the old.

Malaria is only a name, but still the name means something. It is not a myth. The profession has for ages past struggled honestly, cautiously and laboriously forward through the twilight of speculation and experiment, into the full dawn of discovery. Nevertheless, sympathy with the doubter is liable to be suspended whenever we observe that, in a blind struggle for change, he blunders into some new darkness, imagining it to be light, and is satisfied to prefer a shadowy new theory (or darkness) to a well-grounded old one. None can be more willing than we are to admit that those physicians who, in the present day, refuse to adhere to the old belief in the existence of such a poison as a true entity, are doing good, if it be only in promoting discussion upon a question of vast practical importance. We think it especially to be regretted that men who, like the propounders of the climatic theory, who dwell in the very hotbeds of the influence, whatever it may be, with every facility for practical observation at their very doors and in their hospitals, prefer theory to physical research, employing the pen instead of the microscope and test-tube in their attempts to elicit new truth.

It is by no means impossible that future research may dismiss the question of bacteria malaria, which, to us, is the most reasonable, at present—it makes no difference what kind of a micro-organism, whether it be globular, rod, filamentous, or spiral-shaped bacteria, that produces the specific virus from the base mud from which it sprung,—and leave us altogether on some other new theory of this mysterious agency, which in ancient ages was regarded as a demon of darkness, and continues to be developed under all the conditions that could bring it into being three thousand years ago, in all the places where Febris, the goddess who anciently presided over fevers, was ever worshiped. The blighting influence of malaria continues to preside as the tutelary genius that human science has not yet been able to expel, only to moderate.

Then, there are several points to consider in the sanitary treatment of this bad air. We must recollect that miasm does not cross a wide, rapid stream; miasm prevails in hot weather, and it can not exist as a cause of disease in cold weather; it is absorbed by thick, living, luxuriant foliage; it can not travel against the wind; it can not ascend a high, steep hill; miasm can not form, or, if does, can not rise, through a foot or two of depth of water, in case there has been sufficient rain to have kept the pond covered; if the summer be a cold summer and dry, it can not be generated without dampness and heat, as there has to be dampness and heat sufficient to generate the miasm. The most favorable circumstance for the production of a miasmatic epidemic, speedy, malignant and wide-spreading, is, the exposure of the muddy bottom of a pond or sluggish stream to the beaming heat of a summer's sun. • In less than a week whole neighborhoods have been stricken down with disease. Yet, under such circumstances, and according to the well-established laws of miasm, five families may dwell within half a mile of a drained pond, and yet only one will suffer from it, and the others remain exempt from malaria.

This agent is like the silent forces of nature: the whistling wind and the peeling thunder purify the air—the aëration of the ground by thorough draining. This evil is like the roots of the vegetable kingdom—they are not seen, neither do they make any noise, yet they are pumping sap to be wrought into leaf, bloom and fruit, with more force than all the engines on the earth, as every tree in the forest has its hydraulic engine, busily pumping up and propelling the vital fluid of its life up through its tall trunk, branching limbs and topmost boughs. What vast forces are thus going on secretly in the green fields, the blooming orchards and verdant woods? We can realize the same force in this silent poison, in its formation under a sufficient heat from the vegetable kingdom. By careful study we can to a great extent evade it, and in many sections eradicate it from the earth, as well as to hold its poisons under subjection.

We are told, by Professor Eberle, a mixture of fresh and salt water in marshes appears to enhance the virulence of miasmata to a very obvious degree. It is a singular fact that the water of the sea is much more apt to enter into putrefactive decomposition than fresh water; and this, no doubt, depends on the great quantity of organic matter which it contains. The worst forms of malarial fever are caused from putrid vegetable and animal matter, as typho-malarial fever, often of an epidemic or an endemic nature, obstinate diarrhœa, etc. The more concentrated the poison is, the more malignant it appears. The influence of high atmospheric temperature in predisposing the system to the deleterious impressions of miasmata, either of a vegetable or of an animal nature, is very considerable, as long continued exposure to solar heat has a special tendency to affect the biliary organs, and to render the system generally irritable. These conditions are peculiarly favorable to the morbific influence of malaria; and it is not improbable that they sometimes contribute, in a considerable degree, to render the miasmatic fevers of inter-tropical or hot climates so peculiarly violent and dangerous.

ERRORS OF DIET, AS A PREDISPOSING CAUSE OF THE MIASMAL FEVERS.

It would appear that free use of animal food in tropical climates is peculiarly calculated to favor the morbific influence of miasm; it is always more malignant and difficult to manage in gross feeders, and those that feed largely on meats as a diet, and those that use malt and spirituous liquors as a beverage.

Miasma assumes an endless diversity of character in different seasons and climates, also various other affections, both general and local, dysentery, cholera, cholera morbus, and diarrhœas. Atmospheric vicissitudes, or cold, predispose the system to receive them; particularly cause the alimentary canal to become susceptible to the poison by its influence on the secretions of the organs of life by first affecting the nervous centres of animal life. Then we have to look well to the skin surface; there are three thousand sudorific glands to the square inch, each gland supplied with a tube—the total length of all the tubes is enormous. When we consider this question, how important it is to keep these glands in a healthy condition. Ventilation, heat agency, sunlight, good digestion, good food, the right kind of exercise and proper sleep (as sleep is intended to repair the loss of power in the system occasioned by mental or bodily work, its length should be just equal to the object to be accomplished, and we should have our sleeping apartments in good healthy condition, clear of bad gases, and in a good healthy air, with a sufficient amount of it); there should be no standing fluid of any kind, nor a particle of food or vegetation, nor any decayable substance allowed to remain in a bed-room for a moment; neither should any light be kept burning except from necessity, as all these things corrupt the air which we breathe while sleeping.

We should watch ourselves in the predisposing influences, in making up our system of hygiene complete, to be temperate, industrious, and look well to personal purity, which the sacred writings often and strongly insist upon—I have known attacks of malaria to follow a debauch. If you are caught in a drenching rain, or fall in the water, by all means keep in motion sufficiently vigorous to prevent the slightest chilly sensation until you reach the house, then change the clothing with great rapidity before the fire, and drink as soon as possible some warm tea—if you are compelled to let the clothing dry upon you, unless by keeping up vigorous exercise until thoroughly dried, is suicidal. By observing sanitary laws closely and watching ourselves on hygienic principles, many of our diseases of a malarial origin could be subdued. Asiatic cholera and yellow fever, down to intermittents, ague and similar maladies, miasm, with all its sequelae, would be in many localities subdued entirely, or moderated to that extent that it would be comparatively harmless. We must have in our houses light, pure air, cleanliness, efficient drainage, pure water and palatable food; without these we can not be healthy, and it will be unhealthy just in proportion as these essential points are deficient. Again, did you ever think of the atmosphere under the bed? The fatal effects of the effluvia from the excreta; the use of a chamber without a lid should be utterly abolished, whether among the sick or well. Where does it go when there is no lid? Its emanations are breathed, the bed-clothes absorb it for us to rebreathe it, and for our bodies to absorb it. Highly polished earthen ware is the only material fit for those kind of vessels. How often this utensil is the first piece of furniture we meet on entering the bed-room of the sick, and it, one-half full, perhaps had not been emptied for twelve hours, sitting there breeding a pestilence, saturating the whole room with offensive matter. A slop-pail should never be brought into the house, let alone in the sick-room. If any nurse declines to look carefully after these things for her patient, because it is not her business, I should say that nursing was not her calling. All utensils should be carried direct to be emptied and rinsed at the proper place, and there disinfected with boiling water. Without these precautions the air of the rooms will become contaminated.

A dark house is always unhealthy; want of light stops growth, promotes scrofula in children, and arouses consumption where there is a predisposition. Give us sunlight and pure air; open the ventilators, don't close them because the fire has gone down; keep the room of a sufficient temperaature, by proper fire, when it is cool; in warm weather open up the house; always ventilate from the top of a window or door; never allow cold drafts of air to blow upon the person when perspiring; look well to the ventilation of the sleeping apartments. Every kind of clothing should be aired before a fire previous to being put on. By not observing these rules evil consequences may result. Never despise fresh air; let it sweep through all the rooms of the house as often as possible; let the nursery, sick-chamber and sleeping rooms have plenty of it; there is nothing to fear from it, however cold, provided you avoid direct drafts, and clothe so as to fortify against rapid decline of temperature—it may be light or heavy, as the temperature requires.

Heat is a wonderful disease-maker; directly and indirectly every sanitary law should be put into double force during a heated term.

Cold checks the surface circulation and sends the blood to the internal organs; this gorges and congests, then congestions and inflammation result. Sunlight freshens and stimulates us, as it does everything in nature; sun-baths cost nothing, and are the most life-giving baths one can take, whether sick or well.

Till within the last thirty-five or forty years medical science thought only to cure disease; it now adds to the art of curing, the higher and nobler art of preventing disease, and as the science advances it will more and more rely on prevention as a means of securing health and long life. The practice of medicine will be revolutionized in a few years; the practitioner of to-day will become a consulting physician to a great extent. By observing and understanding the laws of sanitation many grave diseases will be prevented, and the average duration of life made much longer than it is at present.

Then, to study hygiene, we must bear this fact in mind, that the universe is governed and controlled by immutable laws. All the theories of science and all the rules of art are based on the proposition that the laws which determine all these changes in nature are themselves unchangeable. On this basis only can true science be successfully prosecuted. It comprehends all the laws that determine the changes. Hygiene, then, is a theory of normal vital development; it comprehends the laws that determine the changes in the living organism and the conditions which conduce to or interfere with growth and sustenance. The true healing art recognizes these laws from a sanitary standpoint, and applies them to the treatment of disease and the removal of abnormal conditions. Disease is a result of disobedience to nature's laws; it is then a struggle to rid itself of morbific agency; then the laws of sanitation, as relate to health, to the true physician will aid and assist this effort, by supplying the conditions that will render it successful. This is hygienic, because we learn to use the great elements of nature whieh are normally related to living structures, as air, light, temperature, bathing, diet, exercise, rest, sleep, electricity, magnetism. The facts and principles of sanitation and hygiene must go together; the one depends on the other; the one is valuable only as it is sustained by the other; both go together, and the truth lives triumphant.

Sanitation, then, teaches us how to care for ourselves so as to preserve health, strength and beauty. Its laws, then, are called the laws of hygiene. Further, for an excellent article on this subject, refer to the CINCINNATI MEDICAL NEWS, December number, 1886, pages 816 and 820.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

ANTIRABIC VACCINATION.

IN the preceding number of our Journal we made known the results obtained with antirabic vaccination in the Institute at Turin, directed by Dr. Bareggi. Five individuals succumbed therein, not to hydrophobia, but in consequence of the inoculation of the spinal virus. We are in receipt to-day of still more alarming information.

There existed, we stated, two Institutes Pasteur in Turin, the one directed by Dr. Bareggi, already mentioned above, and another directed by Dr. Baratieri. The five deaths that occurred about twelve days ago in the Institute Bareggi, were attributed by the inoculators to certain modifications introduced by the Doctor into the method of Pasteur. It seems that Bareggi had abandoned Pasteur and approached more closely to Ferran.

We learn to day, however, that these deaths, occurred not in the Institute Bareggi, as above stated, but in the Institute Baratieri, recognized by the Pastoriennes as authentic. From the 25th to the 29th of June, there occurred in the Institute Baratieri three cases of experimental rabies, followed by death, among the patients treated in this establishment.

Adding these cases to those noted in our preceding number, we have eight cases of experimental rabies observed in less than fifteen days in the Antirabic Institutes of Turin.

* * * * * *

Going to press we learn of another death occurring in France after Pasteurian treatment. It was the case of a woman, bitten the 27th of April last, treated at the Institute Pasteur from the 3d to the 17th of May, and sent back as cured to her family. She succumbed to rabies on June 2d.

We also call the attention of our readers to an incident that occurred in the Belgian Academy of Medicine consequent upon a death observed after an incubation of more than three years (see Journal De Medicine, No. 21, p. 336). M. Desguin, who in the Society, has made himself the mouthpiece of M. Pasteur, produced two letters tending to explain this death. The rather embarrassed explanations of M. Desguin were very badly received by the Belgian Academy, where the culte of the spinal virus has greatly diminished since a time.—*A. Litand, in Journal De Medic. De Paris*, July 7, 1889.

IODO-PHENOL IN WHOOPING-COUGH.

Dr. Rothe very strongly recommends this treatment. He has thus treated several hundred children already, and in no case has the duration of the malady surpassed four weeks. His formula is as follows:

℞.	Acid, Carbolic.	
	Alcohol, . .	āā 1 gramme.
	Tinct., Iod., . .	x gtt.
	Tinct., Belladon, . .	2 grammes.
	Aq., Menth. Pip., .	50 grammes.
	Opiated Syrup (French Codex.)	10 grms.

M. S. To be given a teaspoonful every two hours—to infants one to two years old. Below one year the solution is diluted with an equal volume of water. The treatment should be instituted with the appearance of the first symptoms, and continued until the paroxysms become less frequent and less intense, which ordinarily occurs about the end of the first week. Where the infants are put under treatment from the outset, it is not rare to abort the disease before it reaches its apogee; a cure is completed in about 2—3 weeks of treatment. But even in inveterate cases the favorable influence of this medication always makes itself felt. The author has never observed disagreeable secondary effects, even after a continuous administration of 2—3 weeks of the doses above mentioned. No green coloration of the urine. Children take the medicine readily. The children should also be kept as much as possible in the open air.—*Wien. M. Press, No.* 15, *Journ. M. de P.*

APPLICATION OF TINCTURE OF IODINE IN DIPHTHERIA.

Goldwong reports forty-six cases of diphtheria treated by daily applications of pure tincture of iodine. Of these forty-six cases but four died; that is to say, a mortality of 8.6 per cent. Further it must be noted that three deaths supervened in one village (out of seven patients, a mortality of about forty-three per cent.) where the treatment could not be strictly pursued; whilst out of the remaining thirty-three cases there was but a single death (a little girl of five years) which gives us a mortality of 2.8 per cent. This result, so brilliant, is still more remarkable from the fact that in the epidemic of diphtheria which raged in the same village in 1881, the mortality reached fifty per cent. The duration of the malady oscillated between 2—8 days. In the majority of the cases only two paintings were made; only in four cases were there made as many as six to eight; finally, in one case, the child was cured by one application.

The author calls attention to the feeble contagiousness of the diphtheria. In fact, in every one of the forty-one houses in which there were children affected with the disease, there were from two to six children, but only in three houses were there several cases of the malady.—*Ibid.*

SUBLIMATE IN PULMONARY GANGRENE.

Koranyi (*Orvosi Hetilap*, 1889. No. 1, and seq.) has employed with success in pulmonary gangrene, inhalations of 20 c. c. of a solution of sublimate (0.5:1000) repeated three to four times per day.—*Prog. Med. W.* 14, 1889.—*Ibid.*

PHENACETINE IN WHOOPING-COUGH.

R. Heimann (*Munich Med. W.* 12, 1889) reports that he has obtained excellent results with phenacetine in whooping-cough; whilst before the treatment the number of paroxysms ran up to 10—15 per day, they were soon reduced to three, and even disappeared completely in a few days. It was only in the night, when no medicine was administered, that the children were troubled with recurring paroxysms. Dosage: Four decigrms in four doses—boy three years old; three decigrms in three doses—little girl two years old; two decigrms in four doses of five centigrms each—infant of seven months. He never observed any disagreeable secondary phenomena. As soon as the author suspended the treatment, the paroxysms recurred with all their former frequency and intensity.—*Ibid.*

THERAPEUTIC ACTION OF SOZOIODOL.

Nitschmann employs with success the following ointment:

Lanoline, . . 40 grammes.
Sozoidol Sodate, . . 4 grammes.
M. Ft. Ungt.

As a dressing to dirty wounds (wounds made with a dirty, greasy knife, contused wounds made by teethed wheels, superficial or deep burns by explosive substances or fused metals, etc.,) and to ulcers (chronic ulcers of the leg). All these wounds heal under the influence of sozoiod, in half the time required under an iodoform dressing. He has obtained excellent results in the stomatites and in the acute anginas, with the application of a five per cent. solution of zinc sozoiodol. These applications are somewhat painful it is true, but the burning disappears quickly when the mouth is rinsed with cold water.

An aqueous solution of soda sozoiodol (1 gr. 15) is very useful in purulent conjunctivitis and in the blennorrhagic ophthalmia of the new-born.

Furthermore, the preparations of sozoiodol are useful in gonorrhea of the male (injections of a two per cent. solution of zinc sozoiodol), in simple and gonorrheal vaginitis (application of a ten per cent. pomade of soda sozoiodol), in catarrh of the cervix uteri (the cervix dusted with soda sozoiodol powder insufflation of a small quantity of this powder into the cavity with subsequent introduction of a dry tampon), in endometritis (intra-uterine injections of a seven per cent. solution zinc sozoiodol; the injected liquid is allowed to remain but a very short time in the uterine cavity; it is quickly withdrawn); in vaginismus and vulvar pruritus (three per cent. solution of zinc sozoiodol).—*Ibid.*

Radical Cure of Fistula in Ano and Hæmorrhoids by Electricity.

BY DR. W. S. SHOTWELL, 102 OTTAWA STREET, GRAND RAPIDS, MICHIGAN.

Dear Editor:—I would call the attention of the profession to more rapid methods of curing fistula in ano and hæmorrhoids, coupled with safety and their radical extermination.

Having devoted years to this branch of the healing art, many times with tedious and unsatisfactory results, employing the much-talked-of Brinkerhoff and other methods, I now challenge the world to compare results with the methods I now use, in the cure of fistula in ano, be there one or a dozen openings. I employ an electrolytic battery of about twelve ampere power, with sufficient of the cautery element to subdue any hæmorrhage that may perchance occur. My portable battery that I take to the patient's house, is about five inches by sixteen long, and ten inches high, with two cells, and built chiefly for quantity, charging it with tri-oxide of chromium and sulphuric acid. The method of procedure is this: The battery is first charged, and the patient's bowels thoroughly emptied by means of an astringent injection. I then place the patient on his side, and with the Shotwell rectoscope or other suitable specula, the inner opening is located; or, if it be an external incomplete fistula, the side opening of the rectoscope is so turned that the possible opening is in view. The patient is, of course, under the influence of an anesthetic. I then straighten out the fistulous tract nearest the anus with a stiff steel probe of sufficient length, having an eye near its introductory end; and if the sinus does not quite open into the bowel, perforate the intervening tissue till the eye of the probe is distinctly seen in the rectoscope; and leaving it there, I next introduce a lance-pointed probe, having also an eye near its end, about three-eighths of an inch farther from the anus into the solid structure, and parallel with the fistulous tract, till its eye is also seen penetrating the bowel in the opening of the rectoscope. The eyes of both probes are then threaded with the opposite ends of a No. 24 platinum wire about ten inches in length, and both probes are then withdrawn, leaving the wire *in situ*, forming a loop. Both ends are now secured to an electrode, the electric current turned on, and the loop drawn through the partition; in its passage destroying the membrane which lines the fistulous tract. No dressing is necessary, as it is well known that no wound heals more kindly than those made by a battery. The bowels, however, must be kept locked up for at least a week, longer is better, when the patient gets up a well man, complete union taking place by first intention. The above method I have employed in many instances with complete success. For hæmorrhoids and prolapsus ani, I employ a similar treatment, no matter how large the protrusion or how long the patient has suffered. I first bring the growths all outside the anus, and in one treatment of a few moments the work is done, and is always successful; followed by no hæmorrhage or unpleasant symptoms or pain; and should your many readers desire further information, I shall be only too glad to give the same gratis to all who may apply, by addressing me at Grand Rapids, Michigan.

Selections.

Twenty-five Cases of Nephrectomy by Abdominal Section.

At a meeting of the Medico-Chirurgical Society, Mr. Knowsley Thornton read a paper, and accompanied it with a complete table of twenty-five cases, showing age, sex, condition, disease, date of operation, situation of incision, method of treating ureter, whether drained or not, immediate result, and subsequent history to date. Eight of the cases had already been brought before the International Medical Congress in Copenhagen, and these were marked off from the seventeen unpublished cases in the table, and but briefly, if at all, referred to in the context. Of one of them, No. 6, which was reported a failure in 1884, with pain in the bladder and the other kidney, a very satisfactory subsequent history was now given, the patient being in perfect health, married, and mother of a son. There were twenty recoveries and five deaths in the series, a result twenty per cent. better than that generally given for all nephrectomies, including those by lumbar section. This result was compared with that in ovariotomy eleven years ago, the mortality being then much higher for this comparatively simple operation. Two of the fatal cases were pointed to as not properly to be counted against abdominal nephrectomy, one being a malignant tumor which had perforated the right pleura, and the other having died of hemiplegia, which was brought on by anesthesia rather than by the operation. The superiority of nephrectomy over nephrotomy and drainage for the cure of hydronephrosis was illustrated by six cases. Incision of suppurating kidney as a preliminary to nephrectomy was condemned. The author's practice of pinning out the ureter had led to no troubles, and was claimed as the chief factor in success. The removal of suppurating kidneys, without any puncture during operation, was strongly advocated whenever their size admitted it. The superiority of Langenbuch's incision was insisted upon. The question of drainage was fully discussed, and that of the differential diagnosis in sarcoma of the capsule and of the kidney touched upon. A question was raised as to the varieties of tubercular (so-called scrofulous) kidney; and the paper concluded with a promise of records of lumbar and abdominal nephrotomies and nephrolithotomies, in which the mortality was considered lower than in nephrectomy. Either figures or actual specimens were shown of many of the cases. Mr. Clement Lucas claimed that the lumbar operation was more successful than the anterior method. He had operated on six cases without a death, and considered this success due to careful selection of the cases. He insisted on the importance of knowing the working power of the other kidney; the quantity of urea excreted daily should be estimated, and if it were less than half the normal amount, then the operation must be a very serious one. His cases included hydronephrosis, pyonephrosis, and calculous pyelitis; but he had not operated for malignant disease of the kidney. Twice he had explored the loin, but finding the lumbar glands involved he had abandoned the operation. Czerny taught that hydronephrosis was best dealt with by laying open the cyst and stitching the wall to the skin; this was absolutely wrong. The cyst should be removed, for in hydronephrosis it was generally possible to estimate the condition of the other kidney. He questioned whether suppurating kidneys could be removed through the peritoneum with perfect safety, owing to the danger of fouling the serous membrane. The ureter had never given him any trouble; he simply ligatured it and dropped it back. Mr. Thornton said that he did not hope to convert Mr. Lucas to the anterior operation, though he congratulated him on his successful cases. It must be remembered that when a large number of cases were dealt with then the mortality came in. In his first eleven cases all recovered, but in the next fourteen he lost five cases, giving a mortality in the twenty-five of twenty per cent. He agreed that it was important to estimate the condition of the other kidney, but thought that a little risk might be run, even if it were not quite sound, because the labor thrown upon it by a fellow suppurating kidney would be greater than that thrown upon it by the operation. He had not met with any difficulty in preventing septic infection of the peritoneum. He defended his mode of dealing with the ureter.—*The London Medical Recorder.*

Pathology of Chronic Alcoholism.

THE Pathological Society, of London, has devoted much time recently to a consideration of the pathology of chronic alcoholism. The discussions have been prolonged and very interesting. The following brief review of them, taken from the *Quarterly Journal of Inebriety*, April, 1889, will prove of interest.

Dr. Payne, in his opening and closing of the debate, insisted clearly on stating his belief that the ordinary pathological conception of cirrhosis needs reconsideration. He demurred to regarding it as a mere inflammation of the interstitial stroma of the liver set up by alcohol introduced through the portal vein, and producing great quantities of new fibrous tissue, which by pressure destroys the hepatic cells. He insisted that the destruction of cells and the hyperplastic inflammation of connective tissue take place concurrently, and in this view he was supported Dr. Lionel Beale, who held that the essence of cirrhosis is atrophy of cells, and not inflammation of connective tissue. Dr. Dickinson stoutly maintained that the overgrowth of fibrous tissue is the essence of cirrhosis; and Dr. Sharkey showed specimens of apparently healthy liver cells side by side with masses of newly-formed connective tissue even in advanced cases of cirrhosis. He suggests that the liver cells seen in such connection with newly-formed fibrous tissue may be newly-formed cells; his hopeful view of the formation of new cells and new bile ducts is especially noteworthy; in other words, there may be a restoration of tissue in a diseased liver, a possibility supported, as he says, by clinical experience of cases of recovery from grave degrees of hepatic disease.

Not the least interesting part of the debate was that having reference to alcoholic paralysis and other forms of nervous disease produced by alcohol. What is eminently worthy of the attention of practitioners in this connection is the frequency of tuberculous disease in cases of alcoholic paralysis. In fact, the association of chronic alcoholism in all forms and tuberculosis was brought out by almost every speaker, including Dr. Payne, who said truly that the inaccurate impression that habits of alcoholic excess are in any way antagonistic to tubercular diseases must be regarded as swept away. Dr. Dickinson's investigations into the comparatively much greater frequency of tuberculosis in publicans and others whose occupations and habits expose them to the evil of chronic alcoholism, were the first to open the eyes of the profession to the fallacy that alcohol antagonizes tubercle. Many eminent medical men have felt with Dr.

Dickinson that, as alcohol does so much harm, it surely must do some good. But, so far, the good that it does or the evil that it prevents has not been made very manifest. They need more definition. Dr. Izambard Owen says the statistics of the Collective Investigation Committee show that the consumption of alcoholic liquors appears to check malignant disease. This statement should now be tested very rigidly. Malignant disease is said to be on the increase. We have seen the demolition of the belief that alcohol is a preventive of tubercle; it would be some set-off against the mischief it works if it could be shown seriously to antagonize cancer.

The views and opinions of the many leading men who participated in this discussion were expressed in a scientific spirit, not as absolute or final, but as the most probable facts sustained by our present knowledge of the subject. —*Med. and Surg. Rep.*

The Premonitory Symptoms of Alcoholic Paralysis.

BY JAMES ROSS, M.D., LL.D., F.R.C.P.,
PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY; JOINT PROFESSOR OF MEDICINE TO THE OWENS COLLEGE.

NOTHING helps us so much in the treatment of a disease, if it be of such a nature as to be capable of cure or amelioration, as an early recognition of the symptoms of its inception. This statement, true with regard to most affections, assumes additional significance when we have to treat a disease like alcoholic neuritis, which can be readily cured in its early stages by the simple withdrawal of the poison, without any special treatment, but which, when fully established, may resist all treatment or prove rapidly fatal.

Alcoholic paralysis, on attaining the stage of double wrist and ankle drop, loss of the patellar-tendon reactions, and high-stepping gait, is now readily recognized by every moderately well informed practitioner, and accurate descriptions of it have found their way into ordinary text-books of medicine. It is, therefore, quite unnecessary for me to give in this place a detailed description of the condition. I will also pass over such well-known signs of alcoholic poisoning as a bloated face, lightning-like and neuralgic pains in the extremities, morning retching and muscular hyperæsthesia, in order to direct special attention to three symptoms which

I believe to be hardly ever, if ever, absent as forerunners of this form of paralysis, although they are by no means peculiar to poisoning by this agent, being met with in other forms of peripheral neuritis. These symptoms are: (1) Disorders of the tactile sensibilities of the extremities, which patients usually describe as numbness of the fingers and toes; (2) vasomotor spasm of the extremities, named by Raynaud "local asphyxia," and which the patients refer to as "deadness" and "coldness" of the fingers and toes; (3) severe cramps, which are most frequent and severe in the muscles of the calf, although these muscles are by no means the exclusive seat of them.

In order to give greater vividness to my description of these symptoms, I have instructed my clinical clerk to note down in my presence the statements of five patients, the subjects of chronic alcoholism, now under treatment in the wards of the Manchester Royal Infirmary. In order to avoid details I shall only give such a rough sketch of the present condition of these patients as I think will enable the instructed reader to fill in the clinical picture presented by each from his own knowledge and experience.

CASE 1.—G. C——, aged fifty-one years, a lawyer's clerk, states that he has drunk freely of beer, but only occasionally indulged in whisky or brandy. His lower extremities, his body (especially over the loins and buttocks), and his left upper extremity are œdematous, but there is little or no swelling of his face or eyelids, even in the morning. The area of cardiac dullness is enlarged; the apex is displaced slightly downward and outward; the first sound at the apex is impure, the sound at the base is highly accentuated; and the action is very irregular; while the pulse beats 110, and is feeble and intermittent. Scattered sonorous rhonchi are heard over both lungs, and the patient expectorates a moderate quantity of frothy mucus. The urine contains a small quantity of albumen, but its specific gravity is 1020, and it deposits a considerable quantity of urates on cooling. The patient's grasp is feeble, and he experiences some difficulty in performing special movements with the fingers and thumb, but there is no distinct wrist drop. The patient is very feeble on his legs, but there is no ankle-drop, and no distortion of the toes. The patellar-tendon reactions are, however, absent, and the muscular masses of the extremities are very tender to pressure. The diagnosis of this case is that, although the urine contains a little albumen, the anasarca is due, not to renal disease, but to dilatation of the heart caused by the abuse of alcohol, the condition being aggravated by the presence of a little bronchitis.

CASE 2.—A. G——, aged forty-nine years, market porter, states that he drank freely of beer, but had whisky or spirits of any kind only on rare occasions. The patient is suffering from ascites; he has been tapped once since his admission, and now is filling up again. The liver dullness is only about an inch in vertical extent, and the veins on the surface of the abdomen and chest are distended and fill from below. The patient is feeble and emaciated, but there is no special paralysis, and the patellar tendon reactions can still be elicited, although they are very sluggish. The diagnosis is alcoholic cirrhosis of the liver. There is no tenderness or pressure of the muscles.

CASE 3.—G. C——, aged forty-nine years, coachman, admits that he indulged freely in alcohol, although he never got drunk. His regular habit was to have a glass of rum in milk when he got up in the morning; he had a glass of beer in the forenoon, another to dinner, and a third when he got home at night, to be followed by whisky when he could get it. He is suffering from anasarca of the lower extremities and trunk, but the upper extremities and face are free from any swelling. The cardiac dullness is enlarged. and the apex is displaced slightly downward and outward. A soft systolic murmur is heard at the apex, and the second sound at the base is highly accentuated. The urine is pale, specific gravity 1010, and contains a considerable quantity of albumen, while a few fatty casts have been found in it. The grasp is feeble, and the patellar tendon reactions are absent, but there is no wrist or ankle drop, and no evidence of particular paralysis beyond general weakness. The muscles of the calf were tender on pressure when the patient was admitted to the infirmary about six weeks ago, but this has now disappeared. It is possible that in this case there is a renal complication, but the absence of œdema from the upper extremities and face seems to indicate that the anasarca is due to cardiac dilatation, of alcoholic origin.

CASE 4.—J. S——, aged forty-six years, tramcar conductor, says that he drank freely of beer and whisky. He suffering from double wrist and ankle drop, high-stepping gait, loss of patellar-tendon reactions, muscular hyperæsthesia, and other sensory symptoms which are usually met with in a moderately advanced case of alcoholic paralysis. —*London Lancet.*

A New Treatment of the Transverse Fracture of the Patella.

At the meeting of the Clinical Society of London, held May 24, 1889, Mr. Mayo Robson related a case of transverse fracture, which he treated by a new method, to secure bony union without opening the joint (*Lancet*, June 1, 1889.) The bone was broken just below the middle, as the indirect effect of a fall. He pointed out how unsatisfactory were the results obtained by the methods usually resorted to, and added that, although he had never met with an accident in wiring the fragments, yet it was impossible to shut one's eyes to the fact that the patient was exposed to a great risk. He had, therefore, applied himself to the discovery of a method whereby the advantages of bony union might be secured without incurring the risk of opening the joint. In this case the skin over and around the joint was cleaned and rendered aseptic, and the joint was then aspirated. He then obtained two long steel pins with glass heads, such as ladies use for fastening the bonnet, and having thoroughly purified them he drew the skin well up over the upper fragment, and introduced the needle transversely through the skin and muscle just above the level of the upper fragment, repeating the operation with the other needle at the upper end of the ligamentum patellæ. Gentle traction on the pins then easily brought the fragments into apposition. The ends of the pins were then clipped off, leaving about half an inch on either side, and the whole covered with antiseptic gauze. This dressing was left undisturbed for three weeks, and when it was removed there was no redness or other sign of irritation having been caused. Temperature was never above normal, and the patient felt very comfortable all the time. The fragments seemed well united, and the needles were, therefore, withdrawn, a plaster of Paris splint applied, and the patient allowed to go home. We pointed out that the only precaution necessary was to draw up the skin over the upper fragment, in order to avoid undue traction upon it when the fragments were approximated. The integument should be rendered aseptic as well as the pins, and the latter should be stout enough not to bend when drawn upon. If there was much effusion it would be desirable to aspirate. As union occurred without the throwing out of any amount of provisional callus, it was always well to insist upon the use of a Thomas splint for some time after. The advantages of the operation were its simplicity, the absence of risk, and the obtaining bony union. He said that this was the second case of the kind upon which he had operated, and more recently he had performed the same operation in a case of fracture of the olecranon, but it was as yet too early to say anything as to the result.—*Therapeutic Gazette.*

A Solvent for Diphtheric Membrane.

BY WILLIAM C. WILE, A.M., M.D., OF DANBURY, CONN.

THE following case will illustrate the value of a new solvent for diphtheric membrane, which I fear is not fully known to the profession.

James B., an American, twenty years old, was taken with diphtheria on the 10th day of May of the current year. When I first saw him I found all of the characteristic symptoms of this grave disease. Both tonsils were covered with a tough, grayish mass, so pathognomonic of diphtheria, with all of the constitutional symptoms well marked. I put him on the bichloride of mercury, one twenty-fourth of a grain every three hours, gave a brisk cathartic, and locally ordered a gargle composed of equal parts of sulphocalcine and water to be used every hour. The next morning when I saw him there was but a thin coating over the tonsils, and all of the symptoms were better. On the morning of the 11th there was a still further improvement and the membrane was all gone. The bichloride was given at longer intervals, and everything went along nicely, the gargle being used only two or three times a day, and then simply as a prophylactic. On the 15th he took a cold, and I was sent for hurriedly in the evening. I found that both tonsils, uvula, pharynx and the whole vault of the mouth was completely covered with a thick diphtheric deposit. I had never seen a case of diphtheria which had relapsed get well, so I gave a very unfavorable prognosis, deeming it an impossibility for the patient to recover, with such an extensive deposit present. I, however, increased the bichloride to every two hours, and commenced painting the membrane over with a camel's hair brush every fifteen minutes with an undiluted solution of sulphocalcine, beside having him use the half and half gargle every half hour.

The result was simply marvelous. The membrane commenced to fade, and in twenty-four hours there was scarcely a vestige left, and recovery was assured. While the patient made a slow and tedious recovery, he did recover, and is well and hearty to-day. I regard this one of the most remarkable cases of my experience, and I believe that sulphocalcine saved his life.—*New England Medical Monthly.*

Incurability of Syphilis.

Dr. W. R. Gowers, in the concluding Lettsomian lecture upon syphilis and the nervous system (*British Medical Journal*, February 16, 1889), says: "I believe it is literally correct to say that we have no evidence that syphilis ever is or ever has been cured." Again he says: "The conclusion that the essential element in the disease resists treatment, and runs its course uninfluenced by our efforts, is in harmony with what we know of other specific diseases due to a poison introduced from without, and communicable from one person to another. There is not any fact whatever to show that a single disease of this kind can be cut short. The course of the acute exanthemata can not be arrested by any means at our disposal at any stage of their course, and the same seems true of this chronic exanthematous disease. This is eminently true also of the disease that stands perhaps nearer to syphilis than any other known malady—leprosy."

With regard to the methods of the administration of mercury he says: "The old method of inunction seems to me to bring the patient under the influence of the drug as speedily as it can be done with safety, and with a certainty incomparably greater than the administration by the mouth. I have been deterred from a trial by hypodermic method because the published evidence seemed to me not to afford any satisfactory proof of superiority, being destitute of the element of comparison essential to such proof, and because this method seems to afford an opportunity for psychical influences not free from risk of that which is undesirable. But I would not for one moment suggest that such an influence has entered into the motives or action of those who have used this method." Dr. Gowers believes that full doses of mercury and iodide of potash for from six to ten weeks will effect all that can be achieved in the removal of the syphilitic process. They should be continued only a little longer than is necessary to remove the lesion, being repeated, it may be, after an interval occupied by tonic treatment or by the other of the two chief drugs.

With reference to the consequences of the belief in the incurability of syphilis he says: "If it is true that we can not cure syphilis, it is most important to consider how it can best be kept in check. This is why the fact of incurability, if true, is so important. A mistaken belief in curability may dangerously hinder attempts at prevention. If no present treatment can prevent future developments, then it is wise, whether these come or not, to anticipate them. I think a custom, sometimes recommended, is prudent, that every syphilitic subject, for at least five years after the date of his last symptoms, should have a three weeks' course of treatment twice every year, taking, for that time, twenty to thirty grains of iodide a day. If this practice were adopted generally, is it not reasonable to anticipate grave lesions would be much more rare?"—*Medical and Surgical Reporter.*

Chicago Medical Society.

THE President, Dr. A. E. Hoadley, in the chair.

Dr. S. K. Crawford read a paper on *The Etiology of Typhoid Fever*, which was discussed as follows:

Dr. Oscar C. DeWolf—*Mr. President and Gentlemen:* I do not know where to look for a better illustration of the remarkable change which has come to the medical mind within the last twenty-five years than the paper we have just listened to affords me; a remarkable change in two directions. First, the large acceptance of the germ theory of disease, and second, and logically following that, the preventive aspects of medicine. Twenty-five years ago, when I studied medicine, such a paper as we have listened to to-night was not to be found in all the literature of medicine. There was nothing of all the light with which the orator has this evening surrounded his subject to be found, save here and there a little twinkle touching some supposed germ. It is a very satisfactory thing to me to approach the study of disease from the etiological standpoint, and we are making steps in that direction with greater pace than many of us suppose.

His first proposition is, "typhoid fever is the product of the living germ, a contagion vivum." I accept this to the fullest extent. I do not believe that typhoid fever is ever the result of any combination or association of filth, or heat, or moisture, or any emanation from them. I like to draw upon my own observation, and I should like to call your attention to a neighborhood near this city, where, if it is possible that such emanations can produce typhoid fever, we should look for such a result. I refer to a neighborhood twenty-nine miles from our former limits, a station known as Globe Station, in Indiana, to which neighborhood all our dead animals are removed. The Union Rendering Company own that township, and have erected rendering works there, and there have been removed there yearly about 4,000 horses, 14,000 dogs, 4,000 to 5,000 beeves, 20,000 hogs. Those animals have been cut up on the floors of the establishment and thrown into the rendering tank. There are no sewers, their open drains and gutters run through the neighborhood, the soil and the water is saturated with animal matter in every stage of decomposition. What an atrocious field there is for exhalation, and if exhalation from animal matter undergoing decomposition could produce typhoid fever, what a harvest of typhoid there would be. And yet for nineteen years there has not been a case of typhoid fever among those operatives nor in that township. Why? Simply because the typhoid germ has not been introduced there. I shall refer to that again in discussing the possibility of animals communicating typhoid fever. So much for the first proposition.

After Proposition 10, I want to put an interrogation mark: "and the air we breathe." "The typhoid germ may be introduced into the body by means of the food weeat, the water we drink, and the air we breathe." I do not believe there is a single well-observed fact connected with the natural history and diffusion of typhoid fever that sustains that proposition. I believe the typhoid germ is incapable of atmospheric diffusion. The orator has referred this evening to Murchison's observations. Do you believe, Mr. President, as a clinical teacher, that the well-marked lesions of typhoid fever may appear in an individual 24 hours (these patients died, one in 24 hours and one in 27 hours) after the reception of the typhoid germ. That was a well-marked exhibition of the reception of a poison other than the poison of typhoid fever. Murchison's statistics of typhoid fever in the hospital at London, under his charge, are much more instructive on this point. He says that in 14 years there were 2,506 cases of typhoid fever under his charge; only eight occurred in the hospital. I may be told that the typhoid germ is of a character requiring a double development before it is in a condition to become active; that is, immediately after such typhoid germ leaves the individual, it is not in a condition to produce results. And how about the washerwoman who for 14 years washed the soiled clothing of these 2,506 patients? Is it probable that if the typhoid germ is capable of atmospheric dispersion, a larger number of cases would not have been affected? Illustration after illustration crowds into my mind.

Take New Orleans and see if we can find anything instructive there. New Orleans has no sewers, her gutters receive the filth from the houses, and this slowly passes along them until flushed with water from the Mississippi. The ground is saturated with organic matter. Now what an atrocious field is that for the development of the typhoid germ, and it is prevalent in New Orleans gutters, and yet New Orleans is the only city in this country that rivals London in its typhoid mortality, and why? She receives her water supply for domestic use from the heavens, stores it in cypress wood open tanks, and this water supply is beyond the suspicion of typhoid pollution. Now the rain is the sewage of the atmosphere, and if the typhoid germ be capable of atmospheric dispersion, if the typhoid germ may be air-borne, buoyed up like an atom of dust, settling upon the surface from which this rain-water is received, how would it be possible for New Orleans to escape the fearful ravages of typhoid? Take the recent epidemic at Plymouth, Pennsylvania—1,200 cases of typhoid, and the dejections from these typhoid patients thrown broadcast everywhere, and epidemic manifestations of the disease covering every nook and corner of that village save two: Broadway with 42 families, 5 members in a family, and Rock Ridge with 27 families 5 members in a family, and only one case of typhoid among these families. Why? They received their water supply from the Susquehanna above the point of its pollution. They passed among their neighbors suffering from typhoid fever under the same conditions save their water supply. If it is possible for the typhoid germ to be communicated through the atmosphere, how could they have escaped?

Take the epidemic at Stuttgart in 1872, which city was at the time passing through the ordinary manifestations of typhoid, one case to every 146 houses. The sewage of the city was extensively polluted by the typhoid germ; these deposits of solid material were removed from the sewers and placed in heaps upon the meadows surrounding the city. An army of workmen was placed on these heaps to scatter them on the soil, and not an individual suffered from typhoid infection, and yet immediately there appeared in Stuttgart one of the most terrible epidemics in history. And why? The water supply was received from the drainage from these meadows, showing conclusively that the sewage placed upon these meadows was poisoned by the typhoid germ, and I say had it been possible for the typhoid germ to have received atmospheric diffusion, is it probable that the army of workmen who scattered the material would have escaped? I am familiar with the manure-heap illustrations; I have studied Gietle's cases at Basle, very similar to those related by the author, where laborers removing manure heaps into which typhoid dejections had been thrown, suffered from typhoid. It has never been shown that these laborers did not drink water from wells receiving the drainage from these piles of manure. Now a statement can have no interest to science unless it can be associated harmoniously with other facts, and then it may be used as a fact. There is nothing—I do not care by whom stated or how often stated—there is nothing in the statement that the typhoid germ may be dispersed by atmospheric diffusion, there is nothing in that harmonious with the facts in the natural history of typhoid epidemics, there is everything opposed to it in my judgment.

I have another interrogation point to place after this statement.

Proposition II: "Some of the lower animals become affected with disease from the same family of germs, and their slaughtered carcasses can give the disease back to man." I made inquiry two years ago of two gentlemen, eminent veterinary surgeons of this country, and they both declared to me that they have never seen in the lower animal the peculiar typhoid appearance of the intestinal tract. If it were possible that the pig, for instance, whose digestive apparatus resembles man's very closely, if it were possible that the pig could suffer from typhoid and that the dejecta from the pig could carry the disease, is it not probable that the dispersion of the typhoid would be much more prevalent than at present? Is it not probable that in the fifty thousand dead animals received at Globe Station last year, or the fifty or sixty thousand they have received there during the last nineteen years, yearly, is it not probable that the typhoid germ would have been introduced into that neighborhood long ago?—and if it had, there is a field for the development of such a contagion? I do not believe there is anything in the history of typhoid which permits us to accept the statement that it may be produced by the eating of the flesh of food animals suffering from the disease. I do not believe that they do so suffer.

Dr. J. J. M. Angear.—*Mr. President, Gentlemen:* Most of what we know of typhoid fever to-day we know beyond a doubt. It is positive knowledge. I do not mean to say that there is nothing for us to investigate because we know it all. It is not surprising that we accept what is commonly termed the "Germ Theory," so readily, because the evidence of it has come down to us through so many years and we are prepared to receive it.

One hundred years B. C., Varro and Columella taught that malarial fever was caused by low organisms entering the body.

Sydenham, two hundred years ago, taught that infectious diseases were caused by living organisms, and Lenwenhock discovered the cells of the yeast. Dr. William Farr, Registrar General of Great Britain, called the infectious diseases zymotic, caused by something which acted like yeast.

Budd, about sixty years ago, gave us nearly all we know at present of the etiology of typhoid fever, even the prevention of it.

As Dr. DeWolf has said, this paper is a condensation of what we know concerning the etiology of typhoid fever. But I wish to emphasize the fact brought out in the paper, that whatever this may be that passes from one body and enters another as the cause, it is not capable of producing the disease immediately from the one to the other, but must pass through an intermediate state. What takes place in that intermediate state is one of the things we do not know, and I do not know that any investigation has been made of that part of the subject. But a change is wrought; we shall, perhaps, find some analogy if we study the natural history of the tapeworm, which has a different form in the eye, in the lung, and the human intestine. That may be used simply as an illustration of what may take place in the microbes of typhoid fever. We do not believe that it is possible for the germ, if you see fit to use that term, to pass immediately from one body to the other and cause typhoid fever.

We have already said that we do not know what change takes place, but some change does take place, and it is generally in decayed animal matter, fecal matter particularly, and I think if we investigate the subject fully we shall find that there is no better nidus for this transformation than the ordinary manure pile, but, as the Doctor in his paper, and the gentleman who preceded me say, it is incapable of being produced from decayed matter alone. We might as well expect to find potatoes growing in good, rich soil because it is good rich soil, without planting, as to expect these microbes of typhoid fever to be found in decomposing matter without being put there. We do not believe in spontaneous generation. It has been stated, and proven beyond the possibility of a doubt I think, that these microbes are communicable in drinking water; it may be communicated through the food we eat, and I am inclined to agree with the author of the paper that it may pass through the atmosphere, notwithstanding the apparent overwhelming evidence against this theory adduced by Prof. DeWolf.

When we speak of its passing through the atmosphere, we do not mean that it can pass through the atmosphere from a patient immediately to an unaffected person and thus communicate typhoid fever; that we believe to be impossible; I do not know that any one believes that. Prof. DeWolf spent some considerable time on that point, and brought forward some very fine illustrations. I think that Palmer, in his work on "Practice," speaks of a case that occurred in Massachusetts, at the Maplewood Female Seminary. The evidence there was simply, that the vaults had been allowed to fill up and running over for years, and during the heat of summer an old barn was moved and the vaults cleaned while this school of about seventy-five (I do not know the exact number) was in session, and the inmates were attacked with typhoid fever. He gives a diagram of the locality of the buildings and where these privy vaults were located, and gives at the same time the direction of the wind. There were less students taken sick who roomed in the windward part of the building. The bulk of the pupils that were taken sick were from that part of the building where the wind carried the effluvia, and perhaps it carried the microbes as wind would carry leaves. There is no evidence that the disease was communicated in any other way. I say no evidence, because, had it come from the well, they would all have been sick alike. But if some such thing should come from that direction, and the wind should be here, and we find that we are all attacked, while persons in the other part of the hotel where the wind is not able to carry these plants are exempt, but all drink of the same water, it would be conclusive to my mind that the cause must have been transmitted through or carried by the atmosphere.

Again, I do not remember the author, but it is quoted by Wilson in his work on Continued Fever, that a person in the County of Cornwall, England, had a sister who died of typhoid in Wales, and a sister who attended her brought home the bedclothes. This sister escaped infection, but a woman that took these clothes and spread them out on the clothes-line to air was taken sick with typhoid fever. Now, then, those microbes came from that bedding. If it simply came from hanging the bedding on the clothes-line, it must have passed from the clothes into the air and then into the lungs of that person who hung the bedding on the line.

A pretty marked case occurred in my own practice some years ago. A very near neighbor, not more than two hundred and fifty feet from my own house, had a vacant lot by the side of his house which he filled up, averaging about two feet. The material was taken from the vicinity of an old hotel that had been torn down for the purpose of erecting another building, and the material taken away was from the surface, because it was better soil to make a garden of, but not being enough, the balance was taken from the alley in the rear of a jail, and I may say here, that the material from the cells in the jail had been invariably thrown out into the alley, and a large portion of material of a similar character had been thrown out in the vicinity of this hotel and in the vicinity of the privy vault; that material was taken to fill up this lot. In this family there were three children, who were incessantly playing upon that soil as the wagons would bring in and dump a load; it was something new and a source of unlimited amusement and excitement, but no other children played there. All three of these children were taken down with typhoid fever. The well that was in the vicinity of the house was on higher ground, and the children were taken sick too soon for the water to be contaminated, and if it had been contaminated somebody else would doubtless have suffered from the disease, as a large number of persons drank from that well, so that I can not see that these children derived the typhoid fever from any other source than the microbes in the material used in filling up the lot; these children breathed these microbes, and were taken down simultaneously with typhoid fever.

I would like to make a few remarks with reference to vegetable matter being a nidus. I do not think that we can lay much stress upon the vegetable part of it; it must be animal matter, or it must be largely animal matter. Now, as far as the vegetable is concerned, it may answer as a receptacle for the animal matter containing typhoid microbes, just the same as the dry bedclothes may be a receptacle, or we may find hay and straw a receptacle, but we can hardly call it a nidus where it might live for an indefinite length of time. There is one marked illustration in our history of this subject, where the patient died upon a straw bed, and in course of time that bed was thrown out and children played with the straw, and in playing with it breathed in something through the atmosphere, and were stricken down with typhoid fever. I do not know that that would go to prove that the vegetable matter of the straw was really a nidus for this peculiar germ. It was the animal (perhaps fecal) matter in the straw that was the nidus. Dr. DeWolf alluded to the matter of eating food. I think, perhaps, there may be some little doubt about it, for in all the cases of which I have read, I think there are more or less objections to calling it typhoid fever. In the cases that have been quoted by the author, I think if you read closely you will find that some of these persons were taken with nausea and vomiting before they reached home; that was too soon for typhoid. Some of these patients died within twenty-three hours, that is too soon; and others died within twenty-five hours, and some of these cases that vomited were not sick; showing that whatever there was there, they threw off from the stomach, and they were not sick beyond the matter of vomiting. Some of these cases got well in eight days; they got well too soon for typhoid fever, and, I think, if I had been calling a case typhoid fever, and my patient got well so soon, I should be inclined to think I had missed my diagnosis. I think authorities will bear me out in saying that typhoid patients will not get well in less than twenty-one days, no matter how mild the case, nor what treatment we may pursue.

Large Nævus of the Forearm—Treatment.

BY A. C. W. BEECHER, M.D.,
Late Demonstrator of Anatomy, Jefferson Medical College.

MARGIE B., aged six months, has a large nævus upon her right forearm. In this, as in all cases so young, it is congenital, and has been increasing somewhat.

The tumor occupies the anterior face of the right forearm, extending from the metacarpo-phalangeal joint of the thumb upon its palmar surface across to the ulnar side of the carpus, and extending upward to within an inch of the bend of the elbow (at which point are several small vascular spots, and which probably would have eventually become merged into the general mass); laterally it extends from the outer radial edge of the posterior surface of the forearm, to the inner ulnar edge of the anterior surface, thus occupying one-half of the circumference of the forearm.

The tumor is elevated from one-half to three-quarters inch above the normal level of the contour of the forearm. There are several transverse depressions in the tumor due to the fatness of the child (which is very large and very well nourished). From pressure, the skin in one of these became excoriated, and a painful ulcer followed. The tumor is of a dark purplish color, and exhibits all the characteristics of its class. The painful condition of the ulcer, together with the deformity produced by the tumor, and the risk of an accidental laceration or incision into it producing alarming, if not fatal hemorrhage, make its eradication desirable, if not imperative.

In a consultation with the late Prof. Joseph Pancoast, he suggested the passage of strands of silk saturated in solution of chloride of zinc through the mass to produce coagulation of the blood in the vessels passed through, and by the resulting inflammation and absorption reduce if not obliterate the tumor. This method I adopted with some modification. I procured several sailmaker's needles about four inches long, had them curved for about two inches of their length from the point, the shanks being left straight. Arming each of these with half a dozen strands of silk and saturating them with the chloride of zinc, I passed them transversely through the base of the tumor at three points, allowing the concavity of the needles to curve over and fit the convexity of the forearm, entering the needles at the junction of the healthy skin with the tumor, and making the exit in like place upon the opposite side, being careful to ascertain that both the radial and ulnar arteries were beneath the needles, and not included in the ligature. Before the needles were drawn through, the arm was firmly grasped above and below the tumor to steady the extremity, and to check the circulation until the zinc in the saturated ligatures when drawn, had well acted upon the surrounding tissues, preventing hemorrhage and absorption of the zinc.

The ligatures once in position, their ends were brought up from the sides and tied over the mass just tight enough to depress the tissue under them, and by tightening these from time to time, I designed dividing the tumor into transverse segments; that accomplished, to sub-divide these by ligatures passed through their base parallel with the long axis of the forearm, and subsequently strangulate these with pins and ligatures. The combined action of the ligatures and chloride of zinc so thoroughly cut off the circulation, that the central portion of the tumor between the first and third ligatures sloughed out in a few days, leaving a healthy surface underneath, only the margins retaining the characteristics of the disease, which were, later on, strangulated in small portions with pins and ligatures.

The surface left after the slough was removed was treated by skin grafting from the mother, and was partially successful.

The ball of the thumb was treated by taking a delicate straight needle with a single strand of silk steeped in chloride of zinc, and then passing it through the parts as in darning a delicate fabric, the silk remaining some two or three days; the vessels were occluded, and the discoloration was entirely obliterated.

There was but little constitutional disturbance, the surface cicatrized and contracted to less than half the original area with no impairment of motion, and is not observable unless attention is called to it. The dressing in this case was merely patent lint and oxide of zinc ointment. When the granulating surface appeared sluggish, it was stimulated by application of nitrate of silver.

This operation was performed when cleanliness, carbolic acid, and permanganate of potash solutions only were in vogue, and is only reported because of the method of dealing with the tumor, which was quite formidable of its kind, and the highly satisfactory result.

The darning process I believe to be applicable to many of the red spots so frequently seen upon the face; it is safe, and not disfiguring, the cicatrices being slight. The chloride of zinc I believe to be the best of the agents which could be used as above described. A singular coincidence in connection with this case is, that when the mother was far advanced in the pregnancy of which this child was the product, the father, while inspecting a new but not completed residence, fell down the stairs, severely injuring and bruising his right forearm; this accident shocked and distressed the mother very much at the time. Was the nævus the effect of maternal impressions caused by the accident to the father? It is at least a remarkable coincidence.—*Medical Times and Register.*

Some Observations on the Care of Children's Eyes.

THE fact that from thirty to fifty per cent. of the inmates of our blind asylums, and three hundred thousand blind of Europe, owe their misfortunes to neglected eye diseases incident to child-birth and childhood, has prompted this study.

Ophthalmia neonatorum is a purulent conjunctivitis of the new-born child; beginning on the third day as a rule. It is due to a morbific pathogenetic agent in the birth-canal. The treatment should consist of preventive and curative measures. To meet the former, such a germicide should be instilled into the eyes of the new-born infant immediately upon delivery (Cohen). Boracic acid promises much as a prophylactic agent; should the disease gain headway in spite of one's preventive efforts, cleanliness and a solution of nitrate of silver can be relied upon.

Simple Catarrhal Conjunctivitis is the most common of all the diseases of ophthalmology. Its point of departure is the palpebral layer of the conjunctiva, extending gradually over the whole sac. Though simple, and innocent *per se,* if we accept the bacteriological origin of conjunctivitis, we must admit that it may develop into the purulent form. All are equally exposed to the germs of catarrhal ophthalmia, but in this, like all other diseases that flesh is heir to, its occurrence depends upon the power of resistance resident in the organ threatened.

One conjunctiva may furnish a proper soil for the culture and development of the bacilli and inflammation of conjunctiva, and another successfully resist their invasion. Accommodation strain, inflammation of the lachrymal apparatus, marginal blepharitis, a long life in impure air, will invite the disease.

Considering the liability of neglected simple conjunctivitis to become granular lids, it is important to recognize and treat the disease at once; however, if it has gone into that stage when the papillæ of the conjunctiva are hypertrophied, giving the appearance of "sago-like grains" of trachoma, it is difficult to differentiate one from the other; having at last to appeal to treatment for a decision.

Boracic acid gives the best results. Alum and sulphate of zinc are of oral substitutes.

Mr. Higgins and others advise cocaine and atropia in the treatment of simple conjunctivitis, whilst others do not value them so highly. They are useful in relieving the irritation, and contracting the engorged vessels that belong to the disease; but if their use is prolonged, one can see how they may inhibit the vaso-motors that they at first stimulated; and give rise to a more active inflammation than existed at first, finally going on to the development of granular lids.

If error of refraction is the source of the disease, correct with the proper glass.

Should blepharitis marginalis stand in the way of recovery, remove the crusts and touch the raw surface with a crayon of nitrate of silver. An ointment of yellow oxide of mercury has a soothing and often curative effect.

If the cause is traceable to stenosis of the lachrymal apparatus, slit up the canaliculus, and pass a probe through the duct every third day until the tears flow freely into the nose.

Myopia Produced by Accommodation Strain.—The literature on this subject is full of convincing proof that accommodation strain incident to study in our public schools is a most potent source of myopia. It is true, the various errors of refraction are found in the adult whose vocation directs him into other paths than those that lead to literary pursuits; and, in children, when they first enter the educational department of our public schools, the oculists find many hypermetropes; but as the amount of close work increases the converse obtains.

It is still more alarming when we reflect that it is due to defective illumination and sittings in our public schoolrooms. The light that should fall over the child's shoulder comes to him from a lateral or front direction; the desks are too low, or the seats too high—all conspiring to make the child indulge a natural inclination to stoop over his work, thus bringing the object too close for finite vision, necessitating an extraordinary effort of accommodation to adjust the dioptrics of the eye so as to cause these now highly diverging rays to meet on the yellow spot. This combined effort of accommodation and convergence will insure acute vision for a while, but in the course of time headache and other asthenopic symptoms announce themselves; at which juncture nature, in her effort to neutralize this apparent refractive change, causes the extrinsic muscles of the eye to compress the ball, which force, coupled with the congestion of the inner tunics, and the hypersecretion of the intraocular fluids that the stooping attitude of the child has invited, weakens and lengthens all the coats, even to the production of a posterior staphyloma.

What is to be done to correct this evil?

Whilst the system is a public trust, yet we can not anchor our hope in legislation. The mischief can be corrected only by individual effort. To meet that end, Dr. Wiltshire suggests that a proper physician be appointed by the local school boards to test the vision of the children twice during the session, and supervise the hygiene of the school-rooms. —*Virginia Medical Monthly.*

Publication of Details of Crimes.

The renewal of atrocious crime in Whitechapel naturally suggested the fear that the public were again to be deluged with a flood of ghastly and sickening details such as figured so largely in the public press not long ago. We are glad to observe that on this occasion a little more restraint has been shown by the purveyors of news, though it may be doubted whether this welcome improvement is due to any recognition of a higher duty toward the public, or is not simply a tacit admission that a sensation once thoroughly played out can not within a short time be profitably renewed. We are sure our readers will not be averse to considering with us to what extent publicity in the matter of revolting crime or vice is wholesome and commendable, and how far such publicity ministers to the public weal or to mere prurient curiosity.

Public opinion and universal practice alike recognize that on this question there are limits both to secrecy and publicity. No one advocates that even the most flagrant and inhuman crimes should be ignored by the public press, or that the Divorce Court should always sit *in camera;* but there is little danger of error upon this side. Rather do we need to be reminded at the present time that sound sense and public decency, not to place the obligation on any higher plane, demand that some limit should be placed upon the dissemination of highly flavored descriptions of occurrences that are a disgrace to our time and a blot upon our humanity. It is truly pitiable to think that there was ever a time when morning after morning the first paragraph to catch the eye in some even of our leading newspapers was a minute and detailed account of how a wretched outcast of the streets had been hacked in pieces, coupled with a great parade of ingenious theories regarding the identity and motives of her assailant. We recognize that total silence on such matters will be inconsistent with the public safety, and is out of the question at the present day; but surely a little more restraint, a little more reticence, some check upon the wholesale output of moral garbage, would be promotive of the general good without being inimical to the reasonable privileges and just influence of the press.

We base our objection to indiscriminate publicity on two grounds: first, that constant familiarizing of the mind with vice and crime is apt to lower the whole moral tone of those whose characters are yet unfixed by age and education; and, secondly, that such descriptions as those we have referred to are liable to excite to the commission of similar deeds. On the former point nothing need be said, but on the latter the experience of the medical profession is of the utmost value. We know that where the will is weak and the passions and imagination are strong, an evil suggestion may be a most potent stimulus to evil conduct. It is a feature of our imperfect moral development that the most odious crime, if perpetrated with unusual boldness and ingenuity, somehow excites in many minds feelings in which reprobation is strangely mingled with admiration. Again, if a suicide be committed in some manner sufficiently eccentric to impress the public imagination, we may count with almost absolute certainty upon the repetition of a similar case of self-destruction. The weak will become infected with an overpowering morbid idea, which finally finds fruit in action.

These facts are so well known as to have become almost commonplaces to all who have given the question any attention, yet we hear but little protest against the practice of affording, as it were, abundant types on which criminal action may be readily modeled. In some of the States of the American Union there is a law against allowing placards, theatrical or otherwise, portraying the commission of crime, to be exhibited on the walls of the streets, the motive for the prohibition being a dread of the suggestiveness of such appeals to the eye. Such a law as we have before suggested is well worth the attention of our legislators, the danger being practically the same whether the eye be appealed to by the art of advertiser or paragraphist.

Happy as undoubtedly is the state of innocence of the existence and nature of the evil in the world, such innocence is incompatible with an extended acquaintance with life. Yet we might preserve some of its bloom and fragrance a little longer to the young if we insisted that the daily press shall not be made the means of tearing off all the coverings which the good sense and good feeling of mankind have placed over the sores and deformities of society. To look, the truth fairly and fully in the face is sometimes the first of duties, but we no more require to be sickened by the most minute details of crime than we need to spend all our time in the cemetery or the charnel-house.

How far the blame for the evil fashion we are discussing rests with the press, and how far with the public, may be difficult of determination. The newspaper supplies what it is supposed the public desire, and the journalist no doubt silences his better nature by the reflection that if he does not furnish the savory, if unwholesome, dish, some other purveyor will gladly do so, and perhaps even add something more pungent still. This is not, however, an adequate or admissible defense. The press is greatly honored in this country, and its influence is in the main salutary and well deserved. The obligations to properly use that influence are all the greater. Our newspapers are not incapable of being thoroughly popular without leveling down to the tastes of the degraded amongst us. A free press is acknowledged to be one of our greatest national glories. Let the press itself take care not to suggest that the glory is purchased at a heavy price.—*Lancet.*

Splenectomy.

Prof. D'Antona related a case at the Surgical Congress of Bologna, in which he had removed the spleen on account of chronic fever caused by a specific bacterium. The patient, a boy aged three and a half years, suffered from pleurisy, with effusion on the left side, in March, 1887. A few weeks later he had gastro-intestinal catarrh, with high temperature at night, and swelling in the region of the spleen. On the thirteenth day there was resolution of the fever, but the spleen continued to enlarge. Arsenic, quinine and other anti-malarial remedies were tried in vain. The fever returned in a short time, and anti-pyretics were powerless to reduce it. There were occasional sudden remissions to the extent of four or five degrees. Meanwhile the spleen became larger and larger, but the child could run about the house, and had a most voracious appetite. In June, 1888, when Dr. D'Antona saw the little patient, the belly was large, the body emaciated, the intelligence bright. He suspected the existence "of some infection *sui generis* situated in the spleen and invading the organism from time to time." On August 13th splenectomy was performed. The temperature fell to the normal point on the day of the operation, and, though there was slight rise on the following day, the fever ceased entirely on the fifth day. This temporary improvement was followed by gastro-intestinal catarrh, purulent otitis, and afterward diffuse bronchitis. These complications disappeared, and the child seemed to be completely cured. About five months later the boy's father, who was a medical man, had two patients with cerebro-spinal meningitis under his care. The boy contracted the disease and died, but there was no *post-mortem* examination.

Dr. D'Antona presented the extirpated spleen, which weighed one kilogramme three grammes, being about one-tenth the child's total weight. The blood obtained from the spleen was very pale, the white corpuscles not increased, the red discolored. Cultures made in agar-agar broth and serum gave no result for eight days, then a bacillus resembling the microbe of typhoid was discovered, which Dr. Caselli believes to have been the cause of the disease. It grew with difficulty in agar-agar, better in gelatine; but, unlike the typhoid bacillus, it did not grow on potato. Inoculation experiments have so far proved fruitless.

Dr. Ceci described the result of the splenectomy in a girl on whom he performed that operation three years previous. At the age of eighteen menstruation had not yet begun. Twenty days before the operation great enlargement of the thyroid took place. This disappeared in two months, but the patient remained in a marasmic condition. Some months later remarkable improvement took place, and she gained considerably in weight. Coincidently with this improvement hypertrophy of the tonsils took place to such a degree as to threaten suffocation. He removed one tonsil, a fortnight after which the goitre disappeared entirely. The patient gained further in weight, and has since remained in perfect health. Dr. Ceci thinks that the enlargement of the tonsils was vicarious, these organs having in some way taken the place of the spleen, which had been excised.—*The British Medical Journal, May* 4, 1889.

HOW TO AVOID THE ABUSES OF ETHER.

Dr. Geo. F. Shrady (*Med. Record*) says we may avoid the common errors in the administration of ether by observing the following:

1. In commencing the administration of ether the gradual method is to be preferred.
2. Its employment allows the lungs to empty themselves of the residual air, prevents coughing and struggling, and places the organs in the best possible condition to receive and rapidly utilize the ether vapor.
3. After the stage of primary anæsthesia is reached the more pure ether vapor the patient breathes the better.
4. The shorter the time of anæthesia, and the smaller the amount of ether used, the less likely are the unpleasant sequelæ to occur.
5. The more evenly it is administered the less shock to the patient.
6. Anæsthesia should been trusted to experienced administrators only.
7. Many of the fashionable efforts to resuscitate patients are not only useless, but harmful.
8. The minimum amount of force should be employed to restrain the muscular movements of the patients.
9. Mixed narcosis is often advisable for prolonged operations.
10. The utility of the galvanic battery, in threatened death, is yet to be proven.

11. **The most trustworthy means of resuscitating desperate cases are artificial respiration, hypodermic stimulation, inhalation of nitrite of amyl, and inversion of the body.**

THE TREATMENT OF GONORRHŒA AND GONORRHŒAL CYSTITIS.

Dr. Edward R. Palmer, of Louisville, had prepared a paper on this subject, which was read in his absence by the Secretary. He had recently treated fifty-five cases of gonorrhœa, in which the average duration of treatment producing a cure had been 45.18 days. All the cases were in private out-patients. The results, to his mind, were highly favorable to the "mixed" method of treatment. The plan was practiced as follows: Hot irrigation with a nozzle, except in cases of high inflammation, beginning with solutions of bichloride of mercury as weak as one to thirty thousand, increasing gradually in obedience to personal idosyncrasies, with citrate of potassium internally, a teaspoonful every few hours. The irrigation should be made with from thirty to sixty ounces of the solution twice daily.

When the acute inflammatory process was passed the "mixed" method should be used. This was employed by the patient, using a 1-to-500 solution of zinc sulphate in siphon with seven feet head (the solution to be placed in a receptacle seven feet higher than the penis), to be ballooned with half an ounce or more of the solution of zinc by placing the nozzle of the siphon against the meatus. In most cases two such treatments daily, with the internal treatment, would effect a cure in three or four weeks. Experience showed that the bichloride of mercury in solution was the best drug for urethral irrigation. In these fifty-five cases the bladder had been partly filled in some instances, and the absence of all untoward complications, such as prostratitis, epididymitis and cystitis, proved the safety, and also the prophylactic power of this treatment.

THE SURGICAL TREATMENT OF SPINA BIFIDA.

Dr. Carl Bayer (*Prager med. Wochen.*, No. 20, p. 227) reviews the treatment of spina bifida recommended by other authors, and rejects the use of the seton, the injection of iodine, and the excision of a portion of the sac, as being at the same time unsatisfactory and dangerous. He urges that the condition is one analogous to hernia, and should be treated in a somewhat similar manner; that the danger of meningitis in the one case is no greater than the danger of peritonitis in the other, and that as compared with the operation above-mentioned, it is both safer and more radical. In a child ten days old, in which there was a large meningocele of the size of an apple, and who had already developed bed-sores, he performed the following operation:

The child was chloroformed, and the region of the bed-sores cleaned and rendered aseptic. Two lateral flaps were made from the skin covering the tumor and were dissected down to its pedicle. The child was turned on its belly in order to avoid excessive loss of cerebro-spinal fluid, and the sac of the meningocele was opened. The cauda equina was seen flattened out upon the posterior wall of the sac. It was loosened after dilatation of the incision, although in effecting this a slight laceration occurred on account of inflammatory adhesions. Two small arteries were ligated at the end of the cauda. No alteration of pupils and no spasm of the extremities were noticed. The cauda was replaced in the spinal canal, and the sac of meningocele was removed, leaving only two lateral flaps of dura, which were sewed together after thorough antiseptic cleansing of the wound. The muscles and skin were afterward brought together separately. The child recovered completely.

Bayer suggests that possibly in the future, through a greater development of the technique of the operation, a bony roof over the sewed sac may be produced by forming two lateral periosteal flaps from the canal of the sacrum.

A GUNSHOT WOUND DISGUISED BY A STAB.

An interesting case of murder has just occurred here. I wish to call your attention to it, to see if it has a parallel. A dissolute woman shot her lover in a drunken quarrel. The ball (thirty-eight caliber) entered the left thigh at the middle of Scarpa's triangle; the man was sitting in a chair ten feet from her at the time. She was alone with him in the room for some little time after, and, evidently to cover the shot wound, stabbed him to the bone. The external wound presented nothing different in appearance from a knife thrust, and the first autopsy revealed nothing more. During the progress of the coroner's investigation she changed her first story—that he had stabbed himself—stating that she had shot him in self defense, and afterward "gode after" the ball with a case-knife, to get it out and save him. A second examination resulted in finding the ball.—*N. Y. Med. Jour.*

The Therapeutic Value of Oxygen.

THE powerful invigorating influence of oxygen on organic processes is well demonstrated by the following experiment: When an excised frog's heart is attached to a transfusion apparatus and is filled with fresh blood, it registers strong, forcible beats, of equal elevation at first, on a revolving cylinder. This continues for a while, and then the traces become lower and lower, until, in the course of twenty to thirty minutes, the pulsations are reduced to a minimum and cease altogether. During the time in which the heart thus records its action, one can readily observe through its translucent walls that the blood loses the scarlet hue which it possessed at the beginning of the experiment, and gradually becomes darker and darker until the heart stops, when it is comparatively black or carbonized. If now this same blood is taken from the heart and shaken with oxygen, and reintroduced into the heart, the organ resumes its function as vigorously as before. An experiment of this kind may be repeated with the same heart for five or six hours in succession or even longer, and it fully illustrates that the physiological processes of the frog's heart are essentially dependent on a measurable supply of oxygen, and gives us good reason for believing that that which takes place here differs in no wise—at least so far as principle is concerned—from the processes of assimilation and nutrition which occur in the human body.

Clinically, oxygen is gaining in favor, and there can be no doubt that it is an agent of great value, because its application rests on a sound physiological basis, as is indicated by the experiment to which reference has just been made. It has already proved itself very useful in diseases which are associated with profound depression of the vital forces, such as anæmia, gangrene, diabetes, Bright's disease, bronchitis, asthma, heart disease and pulmonary consumption. That it sometimes disappoints in diseases in which it seems to have established a permanent reputation is quite true; but there is reason for believing that a great deal of this may be due to faulty administration. The respiratory surface of the human body is larger than necessary, and is therefore capable of furnishing more oxygen to the hæmoglobin from the atmosphere than is absorbed under ordinary atmospheric pressure. Hence, under the same pressure no more oxygen would be absorbed if the gas were inhaled in a pure state than would be extracted from the surrounding air. Oxygen should therefore be inhaled under a slight pressure, and those who have used it in this way believe they secured the more favorable therapeutic results. This practice is also supported by the researches of P. Bert, who has found that oxygen absorption is enhanced when the body is immersed in condensed air.

Ordinary forced voluntary respiration produces a slight differential pressure between the air and the blood, and in this way produces similar results, though of a less marked character than those which are obtained by use of appliances which exercise direct pressure. Experience seems to show that oxygen may be profitably inhaled in a pure state, or may be mixed with air in varying proportions. When mixed with nitrous oxide its therapeutic properties are increased. On account of the special affinity of the latter agent for the nervous system, it has the power of allaying irritability, of quieting cough, and of producing sleep — a virtue the effects of which can not be overrated in the treatment of respiratory and circulatory affections.—*Editor Medical and Surgical Reporter.*

Tuberculosis.

TUBERCULOSIS in Sleeping Cars was the subject discussed by Dr. J. T. Whittaker, of Cincinnati, on invitation of the surgeons of the New York, Pennsylvania and Ohio Railroad, at their recent meeting at Lakewood, N. Y. The Doctor, who is Professor of Medicine in the Ohio Medical College, brought out many new, original and practical thoughts. As it had been shown that dysentery killed more men in war than the enemy's guns, so he thought it would be shown that disease was more frequently contracted in railway cars than do accidents happen. The last few years have given the startling revelation that the disease, if it can not be absolutely cured, can be absolutely prevented. The Doctor did not believe in the theory of heredity, and proceeded to demolish this idea. To the lungs we must look for the primary affection in the vast majority of cases; and if to the lungs, to the air which enters them. The closer the room, or the more crowded the apartment, the greater the danger of infection. Hence the frequency of the disease in factories, convents and prisons. The mortality in prisons in the last years of a long confinement amounts to 90 per cent. Ziemssen says, indeed, that imprisonment for ten or fifteen years is condemnation to death from tuberculosis.

It would be difficult to conceive, says the author, a conjunction of circumstances more favorable to the dissemination of this disease than is offered in the palace car. It is always badly ventilated, the vestibule car especially is close and hot, sixteen to thirty persons being crowded into a space which might make a small hall, but never a bed-room for a pair of human beings. Somebody is always hurt by a draught, and windows are kept closed, to prevent free ventilation as well as the ejection of sputa, which is mostly deposited on the floors. Cuspidors never contain water, and the temperature is raised to a degree which is sufficient to rapidly disseminate infectious matter. When the shades of evening appear the bedding is opened out and diffuses through the apartment a disagreeable odor. The baccillus is treated to a luxury of clean sheets and pillow cases, but the blankets, mattresses, carpets, and worst of all, the curtains, remain the same until worn out. Consider that every car curtain is or has been occupied by a consumptive patient, if only en route for a change of climate; and if tuberculous matter become deposited on the curtains, bedding, etc., what becomes of it, if it be not dried and disseminated through the car, or gradually incorporated into the lungs of the tired traveler? The danger in some respects is far greater in ships' cabins, but then you have the escape to the upper deck, while in some express trains we do not even get out into the fresh air for our meals or other necessaries of life. The ship passenger may mount to the deck, the prisoner is allowed a part of each day to walk in the free air, but the passenger on an express train is, for all the world, in the condition of dogs inclosed in boxes, made to breath atomized tuberculous matter, until even dogs, naturally immune, become infected with the disease.

Now for the remedy. The plush, velvet and silk hangings must go. Seats must be covered with smooth leather that can be washed off. Carpets substituted with rugs to be shaken at the end of each trip, or, better still, dispensed with altogether in favor of hard-wood floors. In place of curtains, screens of wood or leather; the blankets of invalids' beds to be subjected to steam at a high temperature, mattresses covered with oiled silk or rubber cloth that may be washed off, and, above all things, invalids provided with separate apartments, shut off from the rest of the car, with the same care taken to exclude the far less offensive and dangerous smoke of tobacco. Cuspidors half filled with water, and consumptives provided with sputum cups which can be emptied from the car. The sole and only danger lies in the sputum, and its destruction abolishes the disease. The patient protects himself from auto-infection in the sound parts of his lungs. Is it not wise to look to the construction and management of sleeping cars, and may they not be death-traps in more ways than one?

Microscopy.

The Hunter Animalcules.

"In a large number of animalcules the prehension of food is preceded by another stage, the search for food, and, in the case of living prey, by its capture. We shall not investigate these phenomena among all the protozoa, but shall direct our attention especially to the ciliated infusoria. Their habits are a remarkable study. If a drop of water containing infusoria be placed under the microscope, organisms are seen swimming rapidly about and traversing the liquid medium in which they are, in every direction. Their movements are not simple; the infusory guides itself while swimming about; it avoids obstacles; often it undertakes to force them aside; its movements seem to be designed to effect an end, which in most instances is the search for food; it approaches certain particles suspended in the liquid, it feels them with its cilia, it goes away and returns, all the while describing a zigzag course similar to the paths of captive fish in aquariums; this latter comparison naturally occurs to the mind. In short, the act of locomotion as seen in detached infusoria, exhibits all the marks of voluntary movement.

"The hunter infusoria are constantly running about in quest of prey; but this constant pursuit is not directed toward one object any more than another. They move rapidly hither and thither, changing their direction every moment with the part of the body bearing the battery of trichocysts held in advance. When chance has brought them in contact with a victim, they let fly their darts and crush it: at this point of the action they go through certain manœuvres that are prompted by guiding will. It very seldom happens that the shattered victim remains motionless after direct collision with the mouth of its assailant. The hunter accordingly slowly makes his way about the scene of action, turning both right and left in search of his lifeless prey. This search lasts a minute at the most, after which, if not successful in finding his victim, he starts off once more to the chase and resumes his irregular and roving course." *—From Binet's Psychic Life of Micro-Organisms.*

Prehension of Food.

"In constant pursuit of its prey, the leucophrys seizes its victim by two stout vibratile lips with which its mouth is armed, and swallows them alive and whole. The victims may be seen struggling and tossing about for a time in the interior of the leucophrys' body and afterward to expire slowly under the action of the digestive juices of the vacuole in which they have been enclosed. Placed in a medium well stocked with small ciliates, the leucophrys have their bodies constantly crammed with victims swallowed in the manner above described. Like the other hunter ciliates, the leucophrys does not espy its victims from a distance, and does not guide itself toward them It simply darts about from right to left, every moment changing its direction. It thus increases its chances of coming in collision with its prey, and every time that one of its unfortunate victims falls in contact with its vibratile lips, it is seized, irresistibly drawn toward the mouth and swallowed within less than a few seconds."

"The prehension of food by the didinium exhibits interesting aspects, which have not as yet been observed in any other infusory. M. Balbiani, in his first observations, had often been surprised at seeing animalculæ that the didinium had passed by without touching, suddenly stop as if violently paralyzed; whereupon our carniverous specimen straightway approached and seized them with seeming facility. More careful examination of the didinium's actions soon furnished the key to this enigma. If, while swiftly turning in the water, the didinium happens in the neighborhood of an animalculum, say a paramecium, which it is going to capture, it begins by casting at it a quantity of baciliary corpuscles which constitute his pharyngeal armature. The parmecium immediately stops swimming, and shows no other sign of vitality than feebly to beat the water with its vibratile cilia; on every side of it scattered the darts that were used to strike it. Its enemy then approaches and quickly thrusts forth from its mouth an organ shaped like a tongue, relatively long and resembling a transparent cylindrical rod; the free, extended extremity of this rod it fastens on some part of the paramecium's body. The latter is then gradually brought near by the recession of this tongue-shaped organ toward the buccal aperture of the didinium, which opens wide, assuming the shape of a vast funnel in which the prey is swallowed up."—*From Binet's Psychic Life of Micro-Organisms.*

Gleanings.

NORMAL POSTURE OF A PARTURIENT WOMAN.—The subject of posture in labor is one which has engaged the attention of a number of writers. Dr. A. F. A. King devotes a paper, in the *American Journal of Obstetrics and Diseases of Women and Children,* to the question as to what is the normal posture for a parturient woman? While he says that the most prudent and truthful answer is, we do not know, he concludes as follows: 1. There is no *one* posture that can be normal for the parturient woman. 2. The continued maintenance of one posture wastes and exhausts the forces of labor, interferes with the normal mechanism, and adds to the duration and intensity of the woman's suffering. 3. Exactly opposite results are produced by proper changes of posture. 4. The indications for change are: instinctive desire for it; arrest of the mechanism of labor; emotional discontent, peevishness and despair. 5. The normal mechanism of labor being at present imperfectly understood, and the influence of different postures upon this mechanism, during the several stages, of the several "positions," of the several "presentations," being unknown, the selection of given postures for given conditions can not be defined without further study.

SPEECH WITHOUT THE TONGUE.—Primary tubercular ulceration of the tongue is very liable to be mistaken for cancerous disease. Mr. Butlin states that all the primary tuberculous ulcers of the tongue described and examined by Nedopil, had been cut out under the impression that they were cancerous. Dr. Wm. T. Bull has recently reported a case in which this mistake was, fortunately for the patient, made. Kocher's operation was performed, the muscles of the tongue being cut through on a level with the hyoid bone, and an enlarged lymphatic gland removed, together with submaxillary and lingual glands. The man made a very good recovery, and, three years later, came under observation again with a broken leg, but otherwise in good health; he was able to speak sufficiently clearly to enable him to pursue his daily avocations without attracting attention, and was, in fact, in hospital two days before it was discovered that he had no tongue; he stated positively that the sense of taste was as acute as it ever was. The floor of the mouth was covered with mucous membrane; in speaking he had no difficulty with vowel sounds, but g, k, t, q, m, ch, x and th were imperfect. In 1873, the Hon. Edward Thistleton published a curious book, "The Tongue not Essential to Speech," in which he collected a number of cases in which speech was retained after complete as well as partial removal of the tongue. In one case, that of a railway guard, in which the whole of the tongue was removed by Mr. Nunneley of Leeds in 1861, Professor Huxley, who carefully examined the man as to the impairment of speech, in 1862, reported that the only consonants which he was wholly unable to pronounce were t and d, but l, r, s, v, and z, as well as the final g, were imperfect; th was "very fair." In another case operated on by Professor Syme, only d, j, g, and s were markedly imperfect. These results as to speech were remarkably good, but they might probably now be easily paralleled. The chief interest of Dr. Bull's case was the apparent complete freedom of the patient from any trace of tubercular disease three years after the operation. "By a radical operation," writes Dr. Bull, "the man has been saved from a disease quite as destructive in its career as cancer." Mr. Butlin also, in the work already quoted, expressed the opinion that the manner of dealing with these cases "thus summarily was the best that could be devised."—*Ed. Brit. Med. Jour.*

PARALDEHYDE IN ASTHMA.—Paraldehyde in half-drachm doses has proved a most valuable remedy in my hands in cutting short the paroxysm of asthma. I have tried it repeatedly with the happiest results. But a combination of remedies often acts nicer, and the following combination has never failed to give immediate relief to the troublesome affection:

℞.—Tinct. ipecac. comp.	gtt. xvj.
Sp. ammon. aromat.	ʒj.
Paraldehyde	ʒij.
Sodii nitrit.	gr. v.
Aquæ menth. pip.	q. s. ℥j—M.

Sig.—Teaspoonful in sweetened water every half hour until relief is obtained. R. T. SCOTT, M. D.

IDIOSYNCRASY FOR IPECAC.—A rather singular instance of idiosyncrasy for ipecacuanha happened the other day in a patient, a woman of some thirty-two years. For indigestion, with eructations of gas and bitter taste in mouth, I gave her this mixture:

℞.—Sodi carbonatis	gr. xlv.
Vini ipecacuanhæ	m xlv.
Ext. rhei fluidi	f ʒ iss
Aquæ menth. pip.	ad ℥ iij.—M.

Sig.—Teaspoonful in hot water before meals.

In this preparation there was slightly less than two drops of the wine of ipecacuanha, yet she complained that shortly after taking each dose she felt her face flush, her head become hot and dizzy, and she grew so sick that she was forced to lie down for some time. The last dose she took before coming back had the further effect of partially blinding her, or rather of making her hypermetropic; for, in order to thread a needle, for instance, she had to hold it about two feet from her eyes.

I have recently heard of another case in which a mixture of otherwise innocent drugs, containing in each dose two and one-half minims of syrup of ipecacuanha, produced violent nausea, vertigo and vomiting, and marked injection of the conjunctivæ with bile. ERNEST SANGREE, M.D.

RECTIFIED ESSENCE OF TURPENTINE IN CROUP.—Dr. Lewentaner, of Constantinople, reports four cases of idiopathic croup when the symptoms were so severe as to afford but little hope for recovery. As in each case tracheotomy was refused, he determined to follow the treatment of Dr. Demolow, and administered the rectified essence of turpentine in tablespoonful doses. The symptoms promptly ameliorated and recovery followed in each instance. He also makes use of the following spray:

Essence of rectified turpentine,		
Tinct. of Eucalyptus	āā	4.0
Phenic acid		300.0
Alcohol		300.0
Distilled water		1000.0

To be used in atomizer night and day.—*Bulletin Général de Thérapeutique.*

Incontinence of Urine in Children (Descroizilles).—

Sulphate of strychnine	0 gr. 05.
Syrup	96 gr.
Water	4 gr.—M.

To be given in tablespoon doses: one to twenty a day.

Strychnine	0 gr. 05
Conserve of red roses	2 gr.

Divide into 20 pills. Take one to four a day.

Ergot of rye	2 gr.

Divide into 10 parts: one to three a day.

Ergotine	2 gr.
Powdered licorice.	
Syrup, āā q. s.	

Divide into 20 pills: two to five a day.

Bark and leaves of rhus aromaticus toxicodendron	200 gr.
Alcohol, at 800	800 gr.

Prepare by displacement. A tincture will be obtained of which the dose will be from ten to sixty drops a day.—*La Bulletin Médicale.*

Injection for Uterine Cancer (Cheron).—

Tincture of iodine	½ drachm.
Salicylate of soda	2 ½ drachms.
Tar water	½ pint.

Dissolve: three to six spoonfuls in a pint of warm water. —*La Gazette Médicale de Montréal.*

Powder Stains on the Skin.—The bluish-black spots produced by gunpowder may be removed by painting with the following solution:

Biniodide of ammonium,
Distilled water, equal parts.

Then with dilute hydrochloric acid to reach the tissues more deeply affected.—*Revue de Thérapeutique.*

FATTY DEGENERATION OF THE HEART (Kisch.)—

℞.—Powdered rhubarb root,
Extract of aloes . . . . . āā 2 gram.
Extract of jalap,
Extract of trefoil, q. s.

Make 30 pills: one to be taken at night.

If anæmia coexist, the following pills are useful:

℞.—Sulphate of iron (very pure) . . 3 gram.
Aqueous extract of aloes . . . 2 gram.
Extract of trefoil, q. s.

Make 30 pills. Take one pill night and morning.

In addition, a diet calculated to excite urinary secretion should be ordered.

☞ If indications of a sluggish circulation should be present, digitalis is indicated in combination with a purgative.

℞.—Powder of rhubarb root,
Aqueous extract of aloes,
Powdered digitalis . . . . āā 2 gram.
Ext. of trefoil q. s.

Make 30 pills: one every three hours. At the same time, and in order to increase the cardiac energy, wine or spirits should be administered; but cutaneous injections of ether may also be employed.—*Revue de Thèrapeutique.*

BORACIC ACID IN GYNECIC PRACTICE.—Dr. W. W. Potter, of Buffalo, New York, applies the remedy as an injection, dry, to the vagina, and in the form of boracic acid with alternating layers of cotton. He allows this dressing to remain a week in some cases, and thinks once a week often enough for these applications. He has had good results with boracic acid after plastic operations. In these cases he leaves a rope of borated cotton hanging from the os over the perineum.

Dr. Potter also regards boracic acid as a remedy of great value in sterility due to acrid secretion, which destroys the fecundating power of the sperm. He says it is one of the best powders to render operative wounds in the genital aseptic. Boracic acid is suited to many gynecic uses in which an antiseptic is required.

CALIFORNIA HUMOR: *Delayed Menstruation from an Unusual Cause.*—A druggist in this city was recently consulted by a lady in a case of delayed menstruation, she having passed the regular period by three weeks. She was unable to assign any reason for this unusual occurrence, as she had heretofore been exceptionally punctual. Inquiry developed the fact that she was married and living with her husband. The druggist, a family man of experience, stated that the case was beyond his sphere, but that he thought there was a possible explanation for the suppression. This the patient could not understand, she had "always been so regular." In reply to the question, whether as a married woman a reason for her condition was not somewhat obvious, she answered in the negative, but after a few moments' reflection said: "Yes, I was vaccinated about three weeks since; could that have anything to do with it?" The druggist thought that the vaccination had taken, but he did not say so.—*Occidental Medical Journal.*

RAISING THE STANDARD IN THE UNITED STATES.—It is with unfeigned gratification that we notice the determined movement which the profession of the various States throughout the neighboring Republic is making toward raising the standard of medical education. Knowing as we do the high attainments of many of their teachers, and the thorough course of instruction given by many of the universities, we have always felt sorry to hear the M.D. of American graduates spoken of with contempt by the English and European profession. And yet, how could it be otherwise? Twelve years ago Buchanan was selling his Philadelphia diplomas of M.D., C.M., for five pounds apiece, and he had been doing this for five years without let or hindrance. It will take thousands of first-class graduates to undo the harm which each of those bogus ones did.—*Ex.*

AGE AND VITALITY.—In a meeting of the Hungarian Academy of Sciences, Joseph Korosi read a paper on "The Influence of Parents' Ages on the Vitality of Children." Mr. Korosi has collected about thirty thousand data, and has come to the following conclusions: Mothers under twenty years of age and fathers under twenty-four have children more weakly than parents of riper age. Their children are more subject to pulmonary diseases. The healthiest children are those whose fathers are from twenty-five to forty years of age, and whose mothers are from twenty to thirty years old. Mr. Korosi says that the best marriages are those in which the husband is senior to the wife, but a woman from thirty to thirty-five years old will have healthier children if the husband be somewhat younger than herself. A man from thirty to forty years old ought to take a wife from twenty to thirty. If the mother be five years older than the father, the vitality of the children becomes impaired.—*Ex.*

Editorial.

THE PSYCHIC LIFE OF MICRO-ORGANISMS.—M. Binet has recently written and had published a small work which we noticed among our Book Notices a month or so ago with the above title. He insists that psychological action is not limited to fully formed animals with brains—brains with cerebral hemispheres—but that such action or phenomena is witnessed in micro-organisms.

Animal nutrition, he says, requires very remarkable psychological faculties in the organisms practicing it. "These manifestations of psychic life," he continues, "the progressive complexity of which we intend to trace in starting from the simplest protozoic forms and arriving at the higher—prove that these animalculæ are endowed with memory and volition." In proof of this assertion he groups his remarks under the two following heads.

1. The choice of food; and
2. The movements necessary for the prehension of food.

The micro-organisms, he says, do not nourish themselves indiscriminately, nor do they feed blindly upon every substance that chances in their way. When they ingest food through some point or other of their bodies, "*they understand perfectly how to make a choice of the particles they wish to absorb.*"

M. Binet, in the way of illustration, refers to the amœba. We will quote his words: "The following is what occurs when the amœba, in its rampant course, happens to meet a foreign body. In the first place, if the foreign particle is not a nutritive substance, if it be gravel for instance, the amœba does not ingest it; it thrusts it back with its pseudopodia. This little performance is very significant; for it proves, as we have said already, that this microscopic cellule in some manner or other knows how to choose and distinguish alimentary substances from inert particles of sand. If the foreign substance can serve as nutriment, the amœba engulfs it by a very simple process."

It seems strange to us that M. Binet endeavors to show that such phenomena, as we have quoted, on the part of micro-organisms possess any psychological elements in them. Queer phenomena and such as are difficult to explain are constantly to be observed in nature; but because an organism seems to exercise *choice*, it is not to be concluded that it possesses intelligence even in the very lowest degree. When a seed is placed in the ground, and through influence of heat and moisture a plant starts from it—can the plant be said to exercise a psychic act because it always directs its course toward the surface? When a seed germinates in a room into which a ray of sunlight finds ingress through some crevice or opening, the plant will incline toward it. Can that be regarded as a psychic act—an act proceeding from intelligence? It certainly shows choice.

Dr. Carpenter and other distinguished psychologists regard acts of a much higher order than those that display merely choice, as only automatic—as automatic as the motions of a steam-engine. For instance, when a fly or other insect, which possesses organs of sense—as the sense of sight—sees an object approaching it, it raises its wings and flies away. Does it do so because it is prompted by an idea of danger? Not at all. It has no brain proper—no cerebrum, and can not have ideation. It possesses merely a sensorium, and the impressions made upon it through the organs of sight are transmitted, *by a law of its being*, through nerve fibres to the muscles of its wings, which, made to contract by it, causes it to fly away and escape the danger if, perchance, the object approaching should be of a dangerous character. Throughout all nature there is order; but that it may prevail universally it is often necessary that dead matter should oftentimes seem to exercise choice. Place a galvanic battery at one place and another a thousand miles or more away, with mountains, rivers and seas between. Connect these batteries by a wire; and then connect each one with the earth. Start a current of electricity over the wire, and it will return to *its own battery* through the earth, passing through mountains, rivers and seas. It certainly exercises a choice; for a million other batteries are connected with the earth by a wire, and what else but choice causes it to pass by thousands of other wires, much nearer and much more convenient, to seek the wire that will conduct it into the battery from which it emanated?

It is a choice *governed by law*, but no more governed by law than the movements of a fly are governed by law when it flies away from an object approaching it; nor no more governed by law than are the phenomena which we observe in the amœba, when in search of food it rejects a body that it can not use as food, and absorbs another body that it can digest and apply to its nutrition.

"HE THAT BLOWETH NOT HIS OWN HORN, THE SAME WILL NOT BE TOOTED."—We have placed the above heading in quotation marks because it is not original with us. We copied it from the *Southern Practitioner* of Nashville. We subscribe, however, to the sentiment contained in it.

There are a number of methods of "tooting" one's self. When a doctor reports a case in a medical journal, the "toot" he gives himself thereby is considered legitimate; but when he reports a case in a newspaper, or has it reported for him by a reporter, the "toot" is regarded as illegitimate.

The "toot" in a medical journal is largely legitimate, we presume, because when a physician selects that organ he must necessarily limit his reports to facts, or he will be very apt to be exposed, for all the readers of medical journals are medical men, versed in diseases, and can not very well be imposed upon; and then it is expected that his cases will be of a kind that will bring to the attention of the readers of the journal something new and instructive, by means of which they will be benefited. Thus a person can be borne with in "tooting himself" if, when he does so, he increases knowledge and benefits humanity.

When a doctor "toots" himself in a newspaper, by having a reporter report a wonderful operation that he has performed, we give but little credence to any of the circumstances related. We conclude that the report has been manufactured for the sole purpose of "tooting," to get patients, of which he has probably a great dearth in his practice. On the day we are writing we read a report in a daily newspaper of Cincinnati illustrating the remarkable acumen displayed by a certain medical gentleman in diagnosis. A child of a family, it was stated, some time ago had gotten one of its lower limbs badly injured. One physician after another, of the "highest standing," was called, to attend to it. Each one pronounced that it had disease of the hip-joint, and stated there was no cure for it—it would necessarily be a cripple for life. Finally, after the lapse of over six months, the gentleman who displayed such great acumen was called in. At once he discovered that the trouble with the limb was not hip joint disease, but a dislocation of the femur downward. He began manipulating the limb, and soon there was heard a report like the explosion of a pistol. So loud was the report that it was heard in a distant room. The cure was complete. What a boon he was to that poor child! was the declaration of every one.

But seriously, though it be granted that every statement of the report is true, what benefit would result from the report beyond the "tooting" of the doctor? No new and more accurate means of detecting dislocations at the hip-joint were developed. If the report had shown that the doctor by extensive research and hard study had discovered a simpler method than already known how dislocations could be diagnosed, we might have partly overlooked his selecting a newspaper instead of a medical journal for making it known to the public, but as such was not the case, we must have additional proof to that contained in the report before we can believe that he is so much *smarter* than his cotemporaries.

The present time is not favorable for even laymen to believe in the "toots" of doctors, when there is no other purpose subserved than the "tooting" of themselves.

When a surgeon amputates a limb, extracts a tooth, opens an abscess, removes an eyeball, why report the fact in a newspaper?

Thousands of limbs are amputated in and out of hospitals every day—so, the world over, millions of teeth are extracted every day. Supposing all the surgical operations performed every day in Cincinnati alone were published in the newspapers of this city. The result would be the papers would be filled by them, to the exclusion of other reading.

THE CASE OF MRS. MAYBRICK.—A very late issue of the *Lancet*, of London, contains a history of this celebrated case. Mr. Maybrick was a cotton merchant of Liverpool, and, at the time of his decease, was fifty years old. He had been married eight years, the issue of the marriage being a boy, seven years old, and a girl, three. The deceased and his wife lived happily together until the day, it is said, of the last grand steeple chase, when they had a very serious quarrel, but this was apparently made up through the intervention of their medical attendant. The deceased's family history was good, and his life was insured. His health was fairly good. On April 14th a Mr. Miller prescribed for him for some pain in his head and numbness in his legs. On April 28th Dr. Humphreys prescribed for him for some symptoms he complained of about his chest and heart, which he referred to a strong cup of tea. Dr. H. several days after called to see him on account of his complaining of stiffness of the legs. He expressed his fears that he would be paralyzed. From May 1st to the 9th Dr. Humphreys prescribed for him several times for symptoms that he ascribed to acute dyspepsia. On the 9th there was tenesmus present and looseness of the bowels. The rectum was so tender that an examination of it had to be abandoned. The symptoms at this time suggested some irritant, and circumstances also excited strong suspicions against Mrs. Maybrick. The nurses in attendance were instructed that the deceased was to have no food except what they themselves prepared in the room. Dr. Humphreys, at this time, tested some urine and feces with negative results. Dr. Carter tested some Neave's food with negative results, but in a bottle of Valentine's meat-juice he got distinct evidences of arsenic, both by Reinsch's and Marsh's test. It was too late, however, to save the life of the unfortunate man, who sunk and died on Saturday afternoon.

At the post-mortem there were no indications of any natural cause of death, and the appearance of the stomach, intestines and rectum were those which would be produced by an irritant poison, such as arsenic. That the cause of death was an irritant poison, was the opinion of the three gentlemen who performed the post-mortem. Mr. Edward Davies, an analyst, found arsenic in the liver, intestines and in the kidneys, the total quantity being estimated at one-eighth of a grain in the abdominal viscera. Mr. Davies also found one-half grain in a bottle of meat-juice. He also found arsenic in many other articles sent him from the house. A tumbler containing milk and a handkerchief was found to have between twenty and thirty grains of arsenic in it. Mrs. Maybrick was seen by one of the nurses to remove the bottle of Valentine's meat-juice into another room—afterward found to contain arsenic,—to return with it in a very suspicious manner, half-hidden in her hand, and to replace it on the table.

Dr. Stephenson, Professor of Forensic Medicine in Guy's Hospital Medical College, and Analyst to the Home Office, examined some of the viscera and confirmed Dr. Davies' report. He expressed his opinion that death resulted from poisoning by arsenic.

For the defense, Dr. Tidy, the Lecturer on Medical Jurisprudence at the London Hospital Medical College, who was called on the same day as Dr. Stephenson, contended that it was not a case of arsenical poisoning. He argued that the four symptoms—vomiting, purging, pain in the stomach, and soreness of the eyes—were absent, and that the small quantity found in the body of the deceased was accountable for by the alleged habits of the deceased. Evidence from America was brought by two witnesses, who testified to the deceased having taken arsenic some years ago, and by a retired Liverpool chemist, who identified the deceased by means of a photograph, who deposed to the fact of the deceased having gone to his shop to have "pick-me-up's," containing doses of Fowler's solution. Dr. Rawdon Macnamara, of Dublin, also gave evidence for the defense, contending that the deceased's symptoms did not correspond with those of patients suffering from poison by arsenic. Mr. Paul's evidence went to show that there was arsenic in the glazing of the pan in which the lunch was warmed, which might be set free by muriatic acid. He also contended that if arsenic had been present in the urine, it must have shown itself by Reinsch's test which Dr. Humphreys employed.

Mr. Justice Stephen, in summing up, alluded to the partisan character of expert evidence, quoting also the old saying that "a physician was a man who put medicine, of which he knew little, into a body of which he knew less." He deprived the sarcasm of its sting, however, by the compliments which he paid to the various medical witnesses, the whole of whose evidence, as well as that of others, he went carefully through. At her own request the prisoner was allowed to make a statement. She stated that the solution of fly-papers was for a cosmetic, as her mother and some friends in Germany could have testified. She added that she put some white powder in the meat-juice at her husband's request, and, as some of it was spilt, filled it up with water.

The jury were only absent from court about forty minutes, and returned with a verdict of "Guilty." Sentence of death was pronounced upon the unhappy woman, who throughout the whole of the long trial and in a close court, in sultry weather, bore herself with remarkable firmness.

THE WORLD'S EXPOSITION OF 1892.—Where shall the *World's Exposition of* 1892 be held, in New York or Chicago? We say in Chicago, by all means. It should be held there, for her citizens will see to it that the thousands of foreigners coming are impressed with the beauties, realize the wonderful resources and comprehend the amazing growth of the West, the Northwest, the Southwest, the South, and the Pacific Coast States. We would not be content to have them go away without visiting all our American cities. We would have them observe the possibilities of the South, inhale the ozone of the Empire State of Texas, and gaze on the picturesque grandeur of California and Yellowstone; we would not have their range of vision confined to Long Island, the Brooklyn Bridge and Central Park, but would have them inspect our mines, take them through our factories, over our farms, show them the stock, our fields, our implements, our granaries and our forests.

When the World's Exposition was held in Philadelphia in 1876, very few European visitors came further west than that city, and saw nothing comparatively of our great country. But, if held in Chicago, they will have to cross many hundred miles of our country, which will afford them a view of many of our cities and villages, our immense lakes, etc. Then, on reaching Chicago, cheap excursions will be found for taking them still further west and northwest, and giving them an opportunity of inspecting a few of our mines of iron, copper, coal, our immense fields, forests, mountains, etc. Let the Exposition be held in Chicago by all means, and not have foreigners return home and think, because they have seen New York City, Central Park, Brooklyn Bridge, Long Island and Coney Island, they have seen America.

A LIBRARY THREE THOUSAND FIVE HUNDRED YEARS OLD.—At the annual meeting of the Philological Society of Great Britain, held on July 1st, a paper by Professor Sayce was read on the recent discoveries in the palace of Amenophis III. From the tablets and inscriptions there found we learn that in the fifteenth century before our era—a century before the Exodus—active literary intercourse was going on throughout the civilized world of Western Asia, between Babylon and Egypt and the smaller states of Palestine, of Syria, of Mesopotamia, and even of Eastern Kappadokia. And this intercourse was carried on by means of the Babylonian language, and the complicated Babylonian script. This implies that all over the civilized East there were libraries and schools where the Babylonian language and literature were taught and learned. Babylonian appears to have been as much the language of diplomacy and cultivated society as French has become in modern times, with the difference that, whereas it does not take long to learn to read French, the cuneiform syllabary required years of hard labor and attention before it could be acquired. We can now understand the meaning of the name of the Canaanitish city which stood near Hebron, and which seems to have been one of the most important of the towns of Southern Palestine. Kirjath-Sepher, or "Book-town," must have been the seat of a famous library, consisting mainly, if not altogether, as the Tel el-Amarna tablets inform us, of clay tablets inscribed with cuneiform characters. As the city also bore the name of Debir, or "Sanctuary," we may conclude that the tablets were stored in its chief temple, like the libraries of Assyria and Babylonia. It may be that they are still lying under the soil, awaiting the day when the spade of the excavator shall restore them to the light. The literary influence of Babylonia in the age before the Israelitish conquest of Palestine explains the occurrence of the names of Babylonian deities among the inhabitants of the West. Moses died on the summit of Mount Nebo, which received its name from the Babylonian god of literature, to whom the great temple of Borsippa was dedicated; and Sinai itself, the mountain "of Sin," testifies to a worship of the Babylonian Moon-god, Sin, amid the solitudes of the desert. Moloch or Malik, was a Babylonian divinity like Rimmon, the Air-god, after whom more than one locality in Palestine was named, and Anat, the wife of Anu, the Sky-god, gave her name to the Palestinian Anah, as well as to Anathoth, the city of "the Anat-goddesses." In a careful reading of the tablets Canon Sayce came upon many ancient names and incidents known up to the present only from their appearance in the Bible. All these he carefully described, as well as several references in the tablets to the Hittites.

RULES TO BE OBSERVED FOR THE PREVENTION OF THE SPREAD OF CONSUMPTION.—The following rules have been issued by the Health Department of the city of New York. They are based upon the conclusions arrived at by a committee of pathologists of that city. The *Peoria Medical Monthly* thinks that copies of the rules should be supplied physicians, to be left in every household where consumption is found:

"Pulmonary tuberculosis is directly communicated from one person to another. The germ of the disease exists in the expectoration of persons afflicted with it. The disease is commonly produced in the lungs (which are the organs most frequently affected) by breathing air, in which living germs are suspended as dust. The material which is coughed up, sometimes in large quantities, by persons suffering from consumption, contains these germs often in enormous numbers. * * This material, when expectorated, frequently lodges in places where it dries, as on the street, floors, carpets, handkerchiefs, etc. After drying in one way or another, it is very apt to become pulverized and float in the air as dust.

"By observing the following rules the danger of catching the disease will be reduced to a minimum:

1. Do not permit persons suspected to have consumption to spit on the floor or on cloths, unless the latter be immediately burned. The spittle of persons suspected to have consumption should be caught in earthen or glass dishes containing the following solution: Corrosive sublimate 1 part, water 1,000 parts.

2. Do not sleep in a room occupied by a person suspected of having consumption. The living rooms of a consumptive patient should have as little furniture as practicable. Hangings should be especially avoided. The use of carpets, rugs, etc., ought always to be avoided.

3. Do not fail to wash thoroughly the eating utensils of a person suspected of having consumption as soon after eating as possible, using boiling water for the purpose.

4. Do not mingle the unwashed clothing of consumptive patients with similar clothing of other persons.

5. Do not fail to catch the bowel discharges of consumptive patients with diarrhœa in a vessel containing corrosive sublimate 1 part, water 1,000 parts.

6. Do not fail to consult the family physician regarding the social relations of persons suffering from suspected consumption.

7. Do not permit mothers suspected of having consumption to nurse their offspring.

8. Household pets (animals or birds) are quite susceptible to tuberculosis; therefore do not expose them to persons afflicted with consumption; also do not keep, but destroy at once, all household pets suspected of having consumption, otherwise they may give it to human beings.

9. Do not fail to thoroughly cleanse the floors, walls and ceilings of the living and sleeping rooms of persons suffering from consumption at least once in two weeks.

By order of the Board. EMMONS CLARK, *Secretary.*

INEBRIETY AS A DISEASE.—The subject of inebriety is attracting much attention at the present day from members of both the bar and of medicine, on account of the many important medico-legal aspects of the question.

As might be expected, the members of these two professions are inclined to view the subject from different points of view, owing to their different studies, and, therefore, reach diverse conclusions.

We believe that inebriety is a disease, but it is a disease which in most cases can either be avoided or acquired. In this respect it differs from the great majority of other ills which afflict mankind, and which are acquired ignorantly. Again, it differs from others in the fact that its accompaniments and consequences are so baneful to the patient's fellow-beings. It is, in fact, a disease *sui generis.*

Dr. Parrish, of Burlington, N. J., in an article on the Medical Jurisprudence of Inebriety, cites several cases in which there was an absolute inability to avoid drink, and as soon as the patient began to indulge he lost all knowledge of right and wrong and committed acts for which a sane person would do penance behind the bars. Similar instances have been recorded by others, and there is no doubt that many an inebriate, innocent of wrong, has been condemned to imprisonment or death for crimes committed whilst under the influence of alcohol. This class of drunkards, however, is very small, and the peculiar condition is receiving so much attention that similar legal mistakes must grow less and less common.

But we think that such a conclusion as Dr. Parrish reaches, can not be sustained. . "Inebriates should not be punished for acts committed while in a state of involuntary unconsciousness any more than are somnambulists or epileptics." This conclusion ought to be admitted in those exceptional cases in which the patient, or criminal, is from the first destitute of will power to abstain from the act, but in those cases in which the man knows that if he begins drinking he is likely to lose control of his actions, or in those cases in which men drink for the express purpose either of committing some criminal act or of so obtunding their reason that they may be ready for any lawlessness, we think the violators ought to be held responsible. The line ought to be drawn at the start, between ability or non-ability to resist the taking of alcohol.

Of course this is difficult, but everything connected with the subject is difficult, and probably always will be; and to make no distinction whatever in cases of inebriety would be to offer a premium on drunkenness and crime.

UNIFORM MEDICAL LEGISLATION.—At the meeting of the American Medical Association in June the section on State Medicine presented the following report, which was adopted, and the Secretary of the Association was directed to transmit a copy of the report to the Secretary of each State Medical Society, with the recommendation that each Society exert itself to secure the enactment of a law embodying the provisions of the report:

"That, in our judgment, the best interests of the public will be subserved by the enactment of efficient medical legislation in every State in the Union.

"That, for the convenience of the profession and the stimulating effect on medical education in this country, it is advisable to secure uniformity of legislation in the essential features of all Medical Practice acts.

"This Committee, therefore, begs to recommend as follows—that in future medical legislation the essential features of the enactment be as follows:

"That all persons commencing the practice of medicine in any of its branches shall possess a license from the State Board of Medical Examiners.

"That all candidates for a license shall submit satisfactory documentary evidence that he or she is a graduate in medicine of a medical institution in good standing with the said

Board, and having a curriculum possessing at least the following requirements:

"*First.*—An entrance examination to test the student's fitness to become a practitioner. This examination shall include at least an examination in English grammar, composition, geography, history, arithmetic, algebra, physics and the natural sciences, together with at least one of the following languages: Latin, French or German, provided, however, that graduates of reputable colleges may be exempt from said examination.

"*Second.*—Before granting a degree of M.D., or M.B., candidates for same shall have attended at least three full and regular courses of medicine of not less than six months' duration each.

"All candidates for a license shall undergo an examination by the said Board of Medical Examiners upon the branches usually taught in medical colleges. Said examination shall be both scientific and practical, but of sufficient severity to test the candidate's fitness to practice medicine and surgery.

"Said Board of Medical Examiners shall issue a license to only such persons undergoing an examination as may be deemed suitable persons to practice medicine. Said Board may refuse or revoke a license for the following named causes, to-wit: chronic and persistent inebriety, criminal abortion, or gross unprofessional conduct.

"All licenses shall be recorded and made a matter of public record with the County Clerk or Clerk of District Court, in the county wherein resides said person.

"Said Board of Medical Examiners shall be appointed by the Governor, for a period not exceeding five years, the members thereof to be chosen from among the reputable practitioners of medicine of the State of not less than five years' residence."

THE CENSUS OF 1890.—As our readers are aware, in 1890 another census of the United States will be taken. The Census Bureau has issued a circular addressed to the medical profession, signed by Robert P. Porter, Superintendent of Census. It is to be hoped that there will be a general compliance with the requests made in the circular:

To the Medical Profession:

The various medical associations and the medical profession will be glad to learn that Dr. John S. Billings, surgeon

United States Army, has consented to take charge of the report on mortality and vital statistics of the United States as returned by the Eleventh Census.

As the United States has no system of registration of vital statistics, such as relied upon by other civilized nations for the purpose of ascertaining the actual movement of population, our census affords the only opportunity of obtaining near an approximate estimate of the birth and death rates of much the larger part of the country, which is entirely unprovided with any satisfactory system of state and municipal registration.

In view of this, the Census Office, during the month of May this year, will issue to the medical profession throughout the country "Physicians' Registers" for the purpose of obtaining more accurate returns of deaths than it is possible for the enumerators to make. It is earnestly hoped that physicians in every part of the country will co-operate with the Census Office in this important work. The record should be kept from June 1, 1889, to May 31, 1890. Nearly 26,000 of these registration books were filled up and returned to the office in 1880, and nearly all of them used for statistical purposes. It is hoped that double this number will be obtained for the Eleventh Census.

Physicians not receiving registers can obtain them by sending their names and addresses to the Census Office, and, with the Register, an official envelope, which requires no stamp, will be provided for their return to Washington.

If all medical and surgical practitioners throughout the country will lend their aid, the mortality and vital statistics of the Eleventh Census will be more comprehensive and complete than they have ever been. Every physician should take a personal pride in having this report as full and accurate as it is possible to make it.

It is hereby promised that all information obtained through this source shall be strictly confidential.

ROBERT P. PORTER, Superintendent of Census.

HOW TO OBTAIN A MICROSCOPE EASILY.—Many young physicians are exceedingly anxious to have a good microscope, but can not well afford to spare the money to purchase one. When a young physician sets up in practice, he has so many purchases to make for an outfit that his money is soon exhausted; and, however much he feels that he ought to have a microscope, he is compelled to postpone obtaining one until he has replenished his exchequer from his practice; but it often takes a long time to do that, for new expenses spring up every day.

To afford these young doctors all the assistance in our power, we have made such arrangements by which we can offer to send an excellent microscope—one that will perform all the work for which a medical man needs a microscope—in return for thirty subscribers to the MEDICAL NEWS and sixty dollars. The instrument has two good objectives—one inch and one-fourth inch; one eyepiece; brass tube of usual length with draw-tube; a very delicate fine adjustment; a thin but solid stage, well adapted for oblique light. The tube has the Royal Society screw, so that any American or English objective can be used.

This microscope can not be purchased of the manufacturer for a cent less than $30.00. We will guarantee it to be in good order and to work satisfactorily. A young physician anxious to have an efficient microscope, can easily, we think, obtain thirty subscribers at $2.00 each. Of course they must be new subscribers.

THERE is no other exhibit of the class in the United States Section to rival that of Wm. R. Warner & Co. From the globe-advertising Philadelphia merchant comes an exhibit which the native pharmaciens can look at with both admiration and wonderment. The display is enough to make any Frenchman curious, and their arrangement such as to be above deprecatory criticism; and those Frenchmen there could not be a people with better taste for the proper and harmonious exhibition of products. A glance through their own magnificent Section of Pharmacy will verify this. Readers would find superfluous a description in detail of the Messrs. Warners' essentially fine installation covering all their soluble sugar-coated pills, salts, etc. Suffice it to remark that at the Paris Universelle their exhibit is thoroughly representative, comprises all the makers' fabrications, and is decidedly an honor to the concern.—*Pharmaceutical Record.*

I HAVE used SUCCUS ALTERANS (McDADE) in my practice ever since it was introduced, and have always found it eminently satisfactory in the treatment of all syphilitic cases of skin diseases and also of all blood disorders.

J. C. MODROCK, M.D., Marion, Ohio.

THE
CINCINNATI MEDICAL NEWS.

VOL. XXII. NO. 261. Old Series. SEPTEMBER, 1889. VOL. XVIII. NO. 9. New Series.

Original Contributions.

Intestinal Hemorrhage and Perforation in Typhoid Fever.

BY L. J. MATTHEWS, M.D., CARTHAGE, MO.

I HAVE two objects in view in presenting this paper: First. To produce *ante-mortem* evidence which ought to be conclusive that the continued fever we witness in the Southwest is typhoid fever. Second. To show that hemorrhage and perforation are liable to occur in mild as well as severe cases. For the last twenty years, to my knowledge, it has been questioned by very many practitioners, that our continued fevers are in reality typhoid fever, some considering them typho-malarial fever, others malarial fever complicated with organic disease of some of the more important vital organs, and still others believing that our continued fevers are unlike any observed or described by the eminent men who have contributed to the literature of the subject, or written our text-books.

Outside the hospitals of our cities, it has been impossible to make *post-mortem* examinations in any of those cases which have terminated fatally. Hence, the evidence which in all cases is most conclusive as to the nature of any disease is entirely wanting.

I do not wish to be understood as taking the position that a close observer of experience in the treatment of fevers can not decide in a given case presenting characteristic symptoms, that it is a typhoid fever or is not, without a *post-mortem* examination.

On the contrary, I believe there is no disease in which can be observed all the characteristic symptoms, and occurring under conditions favorable to its origin and development, which can be more confidently diagnosed at the bedside than the disease under consideration.

The facts are, however, that hardly do we find a case presenting many, if any, of the characteristic symptoms except increased animal temperature and general muscular prostration.

In a large majority of the cases there are, apparently, no intestinal lesions manifested. There is no abdominal pain or tenderness, no tympanitis, no diarrhea, but often the very opposite condition is observed. You witness no nervous disturbance, as delirium or partial coma. The tongue is not dry, slick, fissured or red, and but slightly coated. No sordes on the teeth, or any other evidence of a marked typhoid condition of the system. There has been no epistaxis, and upon an examination of the abdomen, you can discover no rose-colored eruption, or any splenic enlargement. The fever is present, and is continuous with fair pulse, yet with feelings of considerable vital depression, and this is about all you can observe.

Such cases, as a rule, run from fourteen to twenty-one days, or more, and get well; or possibly grave symptoms manifest themselves after two or three weeks, and the case dies.

The friends, of course, refuse a *post-mortem* examination, and you determine from the history of the case, biased by the particular views you entertain with reference to fevers, that the case was or was not typhoid fever.

Many are uncertain as to the nature of our continued fevers, and are skeptical, or are total disbelievers in the theory that they are genuine typhoid, because of this failure to recognize the symptoms which are expected, and which, without doubt, are always witnessed by those who have written our text-books or taught our schools; and furthermore, because of the difficulty of accounting for the origin of very many cases which come under observation.

It is very generally accepted that typhoid fever is an infectious disease; that while it is not contagious in the sense that one person will take it from another, as by personal contact, yet that the disease depends upon the introduction into the system, either through the air we breathe or the water we drink, of a specific poison, which produces the disease; that this poison is derived from some one suffering from the disease. To be consistent, holding such views, we must demonstrate that one case is always linked with another previous one, and the spontaneous origin of the disease can not be entertained.

The facts are, however, that in a great many of the cases, it is impossible to account for the infection in any such a way.

The person attacked with the fever lives in the country, drinks the same water, breathes the same air that he has always been accustomed to. He has not been from home for weeks or months, but is prostrated with the fever. It runs its course uninterrupted by treatment, and ends in recovery or death.

A case of fever, occurring under such conditions, presents the puzzling question as to origin, and leads very many to take the position that the disease is not typhoid fever, unless such persons entertain the idea that the fever may occur spontaneously, which I do not think unreasonable, or can be disproved; in fact, a large class of these cases can be accounted for on no other hypothesis.

To illustrate: I treated a family of eight persons in the fall of 1873. They lived in the country; their house was situated upon a high, dry piece of ground; they used water from a well at least one-quarter of a mile from the house, and no stable, or out-house, or privy was near it. The sanitary conditions surrounding the place were good. No damp cellar or cesspools, and no decaying vegetable or animal matter upon or near the premises.

The father died, and the mother and six children recovered. The duration of the disease was from fourteen to twenty-one days. Death occurred in the third week. The pulse of these cases ran from 90° to 110°. The fever in the worst case only reached, at its highest point, 103½°. There was a slight daily morning remission, the thermometer indicating from three-fourths of a degree to one and one-fourth degree of temperature less in the morning than in the evening. The tongues had upon them a light yellowish coat, never became dry or fissured, no epistaxis, no sordes, tympanitis, nor diarrhea, no delirium or coma. I have been personally acquainted with those who have occupied the place since then, and no cases of fever on that place or among the near neighbors have occurred in the period spoken of. The most important fact connected with the history of these cases, is, that the father died of intestinal hemorrhage in the third week of the disease. So far as

I am able to learn, no member of the family had been near any source of typhoid infection.

Dr. Brooks kindly gives me the following: . His brother lives on a farm in the country, on a high prairie, and in a new, well-plastered frame house, which he first occupied in the fall of 1886. He has a large cistern, and connected with it a cut-off in the conductor from the roof, so that he could allow the roof to be well washed before letting water into the cistern. He had then clean cistern water, he drew by hand, which was used for all purposes about the house. His wife had not been off the farm since July. She was taken with a severe chill October 1, 1887, though she had been ailing a week before this. Her fever ran down in twenty-one days, and again began and ran twenty-three days, when she miscarried. Her loss of blood broke the fever up and she slowly rallied. Their little boy, aged about five years, was attacked the 20th day of November, 1887. He was dosed with quinine. He was made to lie in bed, and was only allowed milk and broth. The first week the fever averaged 102°. In twenty-one days his fever was in the morning 98½°, but at 4 P. M. 102½°. He had a high fever then for over two weeks, which ran down in twenty-one days. He now became partially insane, though he slept well, and was several weeks lying in the bed unable to walk, and at times feverish. He never had diarrhea, but after the first week enemas were given. He had frequently painful colics during his fever. He had considerable tympanitis, after his relapse.

After this boy, a little girl aged two years had a mild run of fever for fourteen days. At this time, another little girl aged six years, of a large and robust build, was seized with the fever on the 6th day of December, 1887.

These children were not allowed in their mother's room except to come and go once a day, until they were taken down sick. The girl's fever averaged 103° the first week, the second week more, the third week not quite 102°; the fourth week she grew worse, and it ran over 103½°, until two days before perforation, when it was 102¾°. She was kept in bed, and only allowed milk and broth. She would not use bed-pan. She had frequent colics, with tympanitis. She had a diarrhea from the first day of her fever. She took all the milk allowed her. She lay on the bed very quietly, and was not delirious. To see her red cheeks and white face, with her wistful look from eyes flashing brightly, was most pathetic. Perforation occurred on the twenty-eighth day, after which she lived over thirty-three hours. Perforation produced great restlessness and horrible pain. The abdomen swelled tighter and tighter, and became more tender to the touch, and she could not be relieved from her pain by opiates.

The doubtful origin of the fever which ran through these two families, with the absence of characteristic symptoms among the inmates of one of them, would serve as an argument with some against the idea of these cases in reality being typhoid fever; and such a position would be a plausible one were it not for the fact that in each family there occurred a death; one the result of hemorrhage, and the other of perforation. We know of no disease of like character, in which these complications would have occurred, except typhoid fever.

I could cite many more isolated cases occurring in localities in which the origin can not be accounted for consistent with the present theory of the origin of the disease, but time will not permit. These cases illustrate forcibly the fact, that cases of continued fever occurring to all appearances spontaneously, and running the ordinary course observed in typhoid fever, but without characteristic typhoid symptoms, are in reality true typhoid; and the *ante-mortem* evidence given ought to be as convincing as *post mortem* examinations had they been made.

The following are a few of many cases I can relate in which hemorrhage and perforation have occurred causing death, the cases being of that class the surroundings or conditions of which are such that the origin can be more easily accounted for.

The cases, however, were seemingly mild, were not accompanied with the characteristic typhoid symptoms, and bid fair to run a favorable course until the complications arose.

A young man, aged about twenty-seven, of fine physique, and of previous good health, except a slight malarial trouble, consulted me for a chill followed by a fever. I prescribed for him, and knowing that he had been suffering from malaria, thoroughly cinchonized him. He took to his bed, and for ten days his only trouble seemed to be increased animal temperature. The quinine had relieved him of his headache and general muscular pain and soreness, and the only thing he complained of was the fever, and feeling of general prostration.

The fever in the evening ran as high as 104°. From one to one and a half degrees less of a morning. No diarrhea, abdomen soft, and not tender or tympanitic.

Tongue not dry and but slightly coated. Was not delirious. He would not have a nurse, but took his medicine himself. His only nourishment was milk. He slept well. On the night of the tenth day his bowels became a little loose, and the lady with whom he was boarding noticed that he would talk a little incoherently unless fully aroused. On the morning of the eleventh, although his pulse was good and his fever not higher than it had been, still from his general appearance I noticed he was not so well. I talked with him and insisted on obtaining a nurse for him. To this he objected, saying, "That when he was sick he did not want any one around." I left him, and at 11 o'clock A. M. was hastily summoned to see him. He had got up, and while upon the vessel he had had a hemorrhage, and became so exhausted that he had to be helped to bed. I found him almost pulseless, with cold extremities and covered with cold, clammy perspiration. He was collapsed. I gave him stimulants hypodermically with morphine, but the blood in clots came from him in such quantities as to render fruitless all efforts at restoration, and before 2 o'clock P. M. he died, never having rallied.

Up to the tenth day there was in this case as little evidence of intestinal lesion as one would expect in a simple case of remittent or bilious fever.

Mr. H., aged fifty-one, a clergyman and a man of great energy and endurance, after an exciting local option campaign took to his bed feeling badly, and having some fever. I was called to see him, and after an examination, informed him I thought he had typhoid fever, which he was not inclined to believe. Aside from the fever, which was continuous, and a rather restless nervous condition, the characteristic symptoms of the disease were absent. His fever at no time reached above 103°. He slept fairly well, was not delirious, his bowels did not trouble him, and his abdomen was not tympanitic. He did not have rose-colored eruption; tongue had but a slight coat upon it, and it never became dry. He took liquid nourishment readily. I felt that the chances for the disease to terminate favorably were largely in his favor. On the evening of the ninth day at 6 P. M. I saw him. He was resting comfortably, his pulse being 92 and temperature 102½°, and all indications were favorable. At 7 o'clock I was hurriedly summoned to see him. I found him with a decided chill and complaining of intense pain in his abdomen. He was greatly prostrated, almost collapsed.

He had just got up out of bed on to the vessel. In straining he was seized with a severe pain and chill. He had to be helped back to bed. His pulse was quick, small and frequent. His extremities were cold and he was exceedingly restless. He continued for some time to complain of abdominal pain. After a few hours a partial reaction came on, the severe pain subsided somewhat, but his pulse still remained frequent and small. He lived fifty-two hours. During this time his bowels did not become greatly swollen; they did not become very hard or tender, as you would expect in peritonitis following perforation. His extremities remained livid and cold from the time of the accident, and complete reaction never took place.

A young man, aged twenty-one, was seen by me in consultation on the tenth day of his sickness. His physician thought at first that he had malarial fever, afterward he concluded it was bilious rheumatism, owing to the fact that he suffered greatly with muscular pains, and pains in his joints. The doctor told me that his patient had had a fever, but that he had broken it up with quinine, and that for three days he had none. His bowels had been inactive—his abdomen was not swollen—he had no delirium—his tongue was only slightly coated and not dry. I found him rather lethargic and dull. His temperature taken carefully in the axilla was 102½°. His pulse was 94, and with a fair volume of strength. I diagnosed the case typhoid fever, and gave an unfavorable prognosis, although I will admit the pronounced symptoms did not justify it.

He remained about the same until the sixteenth day. On that day he had a profuse hemorrhage from his bowels—in the night another one followed, and on the seventeenth day of his sickness he died. To my mind these cases demonstrate, first, that our continued fevers occurring in localities and under circumstances in which it is impossible to account for their origin upon the accepted theory that the fever originates from a specific virus or germ—the product of some other case, are genuine typhoid fevers, and may be fraught with as disastrous results as those cases whose origin can be easily accounted for.

Second: that our mild cases of continued fevers which present but few if any of the characteristic symptoms of genuine typhoid fever, and which are apparently running a very favorable course, are liable to be attended with the gravest accidents, and the hemorrhages and perforation, which at times complicate such cases, are indisputable evidence of the genuineness of the disease.

Now in view of the reasonableness of these conclusions, what should follow? First: that we should recognize the fact that our continued fevers are true typhoid, and cease discussing the probabilities of their being typho-malarial or some new form of fever. Second: base our management and treatment of such cases upon the truthfulness of such a conclusion. Third: do not calculate that because a case of fever is quite mild, and the characteristic symptoms are not present, therefore such cases are easily treated, and do not need careful management.

Experience, the greatest of teachers, tells us that hemorrhage and perforation occur when least expected. We have no indication pointing to the fact that such an accident is likely to occur in any given case. On the contrary, our confidence in recovery is often suddenly destroyed by the unexpected appearance of one or the other of these complications.

It is impossible to state how frequently these accidents occur. In hospitals the percentage may be ascertained. These complications, however, occur sufficiently frequent, and the occurrence is accompanied by danger so grave, that we are justified in being constantly on our guard, and, if possible, so manage our cases as to prevent them.

From the very nature of the disease, it is not to be wondered at, that these accidents occur. The rather, is it to be thought strange that they do not happen more frequently. They are caused because of the ulcerative processes going on in the walls of the intestines during the progress of the disease. In the one case a blood-vessel is opened, in the other the ulcer penetrates the three coats of the bowels. Diagnosis of the hemorrhage is not difficult. A discharge of blood either great or small from the intestines in a case of fever tells its own tale, and at once steps must be taken to remedy the trouble, if possible. It is true we may have a concealed hemorrhage, but an accident of this character if severe is soon recognized by a sudden recession of the fever, and a weakened and possibly collapsed condition of the patient unattended with pain. We have no symptom occurring previous to the hemorrhage, which of itself points to such a complication as likely to occur. Hemorrhage may happen in a mild or grave case—in one in which the diarrhea has been severe or has not been—in those in which the nervous symptoms have been prominent, and when not. All that we can do is to consider that any case is likely to be so complicated, and govern ourselves accordingly.

Perforation is recognized by the severe pain, chill, abdominal tenderness and enlargement, and the collapse. All of these symptoms in most cases manifest themselves very soon after the occurrence of the accident. The shock is due to the escape of the contents of the intestines into the peritoneal sac—the pain to the inflammation which supervenes, and the abdominal enlargement to the passage of gas into the peritoneal cavity.

In some cases in which a peritonitis complicates a case of typhoid fever, it might be difficult to tell whether perforation had or had not occurred. It is said that tympanitic resonance in right hypochondrium instead of liver dullness upon percussion indicates perforation. It is thought that perforation without peritonitis may occur, and in such a case the accident would be difficult to recognize except the resonance in right hypochondrium could be demonstrated.

It is impossible by any one prominent symptom to be forewarned as to the occurrence of this complication.

Like hemorrhage, it may occur in any case, but unlike hemorrhage it is a much more grave complication. It is very rare that a case of perforation ever recovers. In hemorrhage recoveries are frequent; in fact, it has been claimed that a hemorrhage is oftentimes a favorable symptom; but of course, this is a mistake.

In the way of treatment little can be done in either accident with a view of permanently benefiting the patient. In hemorrhage perfect quiet with opiates to prevent peristalsis, and diffusible stimulants are all the remedies that can be relied upon. Astringents are not likely to do much good.

In perforation opiates are the sheet-anchor. The important truth, however, connected with this whole matter is to recognize the fact that our continued fevers are typhoid; that notwithstanding many of the characteristic symptoms are often absent, and that many of the cases appear to be very mild ones—still we should remember that we have no assurance that such a condition will continue throughout the history of a case, but, on the contrary, the very gravest complications may occur.

Therefore, I would advise that in all cases see that the patient has the best possible surroundings. That he has a large, well-ventilated and quiet room—that he be kept secluded from anxious friends, and the presence of the curious—that the diet be a fluid one—that if possible a good nurse be procured and one who will be likely at any time to notice any change in the progress of the disease. That at least when possible two visits daily be made by the medical attendant—that absolute quiet be enjoined upon the patient —that everything which is likely to attract his attention or in any way annoy or disturb him be avoided. That he never be allowed to get up out of bed to attend to the calls of nature—that if possible he be early instructed in the use of the bed-pan. That absolute quiet of body and mind be enjoined and secured if possible, from the very commencement of the disease and carried out through its entire course.

A case so managed, and otherwise has the benefit of appropriate and judicious treatment, stands the best chance for recovery; yet even with all these, from the very nature and history of this disease, we can never confidently predict that in any given case death or recovery is sure to result.

DISCUSSION.

DR. CAMPBELL.—Intestinal hemorrhage is a symptom which certainly demands prompt attention, as it is one of the serious and frequent complications of typhoid fever occurring in the early stages of the disease. It is, I think, generally mild, as it depends on a congestive condition of the bowels and is therefore an exudation, and therefore not apt to occur to a dangerous extent; but when it occurs at the end of the second week and from that onward in the advanced stage of the complaint, it becomes a much more serious symptom, from the fact that it then depends on the opening of a blood-vessel, caused by ulceration or perhaps by the detachment of a slough from the diseased bowels. It then becomes a much more serious symptom, and may occur to any extent. I think, however, it is sometimes difficult to know just exactly the pathological condition from the amount of blood discharged. It is necessary to take into consideration the other symptoms, such as fall of temperature, frequency of pulse and respiration. But another thing that renders this symptom or occurrence a serious one is the fact that it is liable to recurrence; that is, one attack may be succeeded by another after having been once set up by a first attack, as was illustrated in a case that I had recently—a case of a young man twenty-one years of age. He had an attack of hemorrhage, but he survived this first attack although it was very severe and dangerous. About a week afterward the second attack occurred, which in a very short time proved fatal.

It may be some time before the blood is discharged even after the hemorrhage has taken place internally, and therefore very serious and even fatal damage may occur before we get to the patient, especially if we have a considerable distance to go.

Now as regards treatment—as regards the measures to be used—I think a very important remedy is ergot; at least this remedy I have to a considerable extent relied upon, and have been in the habit of giving it subcutaneously, probably three, five or six grains, repeated as frequently as the exigencies of the case demanded. As Dr. Matthews has said, opium is undoubtedly a valuable remedy, and so I think is acetate of lead and tannic acid, and it has been claimed by some that a solution of subsulphate of iron is useful; but it seems to me that such a remedy can not reach the point from which the hemorrhage was produced, so as to produce coagulation, so as to produce a local effect; it does not seem to be reasonable.

Now as regards perforation I will say that I believe the first object should be to prevent the escape of the contents of the bowels into the cavity of the peritoneum; that is the first object, and the second object should be, if possible, to prevent any extension of the peritonitis which is unnecessary. To do this the patient should be put to bed and opium given to allay the pain and secure the rest of the patient, especially as it has the effect of diminishing the peristaltic action of the bowels, and thus secures to the wounded and injured intestine a state of rest and quiet.

Dr. Dewey.—In regard to the name of the disease I wish to say I know it is customary to call it typho-malaria. They have got that idea deep set in their minds, and as a consequence they determine on giving quinine. They can never separate quinine from malaria; that is the evil that results from calling it typho-malaria. I am satisfied that quinine is a bad remedy in any stage of this disease and for any purpose. I have never seen any good from it: it always disorders the stomach and nervous system, and is of no especial good for any purpose; that is the reason why I object to the name. I think if you would call all these cases "typhoid fever," and treat them as such, we should save many patients who otherwise die from enormous doses of quinine. I think the majority of physicians in the country still persist in giving quinine in small or large doses, which I regard as a very great mistake. I once saw a patient treated in a hospital in St. Louis who was given forty grains daily, and it was continued until he was given twelve hundred grains, and he lived; but I have never seen any benefit come from quinine in these diseases. I see no objection to calling all these cases typhoid fever. Some doctors would tell me it lacks one of the symptoms of typhoid fever. Suppose that it does: I hardly ever saw a case which did not lack some symptom usually found in cases of typhoid fever.

Dr. Schauffler.—I think, sir, that the discussion which has troubled so many medical societies so many years, as to whether these fevers of ours are typhoid fever or malarial fever, or a cross between the two, will be settled for us before very long by the microscope.

I think we are not justified in throwing away time on the discussion of this question until that thing shall be settled for us, because it will surely be settled in the near future when the bacillus of typhoid fever and the bacillus of malaria will be recognized. They are a natural history study, and we shall be able, if by no other means, at least by the examinations of blood secretions under the microscope; and if we shall live until then we shall know more than we have ever known, and we shall cease to wrangle about it whether this is typhoid fever or not. I do not believe it is. I do not agree with the essayist; I still less agree with the gentleman who has taken his seat. I do not believe that quinine is of no use on earth and that it is not an antiseptic. The experience of the past and experience of the present is altogether against this. This sort of thing may be very good to laugh about, but that is all it is good for. I do not believe that any amount of doggerel rhymes will ever convince sensible people that it isn't of any use.

I want to say furthermore and finally that I am thoroughly satisfied that intestinal hemorrhage or perforation of the bowels—either one—is not by any means a condition of things confined to typhoid fever; that it may exist in other fevers; that it does sometimes exist in well-recognized affections of other kinds; that it is not impossible to have it come to you in cases of scarlatina, and that it may occur in variola. I believe that ulceration of the intestines is not characteristic of typhoid fever; but ulceration of the mucous membrane takes place in malarial fever and other fevers as well as in typhoid fevers.

DR. BREMER.—I am not prepared to say very much upon the lesions of typhoid fever, but I beg to say that ever since the typhoid bacillus has been discovered by Avery and afterward verified by Cope, it has been my intention to make experiments of my own in this direction. I can not say that in every undoubted case of typhoid fever I have been able to obtain the bacillus—the characteristic bacillus—in a state of pure culture. I have also examined in one case suspected drinking water which was claimed to have caused the disease, and I have found that bacillus in the water. There can be no mistake as to the morphological character and biological properties of this germ. The behavior of the germ, the manner of growth and the manner in which it affects the nutritive soil upon which it is sown are so characteristic that there can not be a shadow of doubt as to the identity of the germ.

In regard to the so-called mixed form of malaria and typhoid fever, I am as much in the dark as I suppose the generality of the profession, but I do believe that the time is near when light will be thrown upon this difficult subject. I believe we shall be able to differentiate between typhoid and malaria once for all. Whether the malarial germ has been really discovered, is the great question in my mind. I am certain that I have seen the bacillus of malaria so-called in affections which have nothing to do whatsoever with malaria. I have seen a case of malaria in which I suspected that a lymphatic vessel had been injured and from which there was a constant flow of lymph to the bladder. I have seen it in the red corpuscles of the blood. As to bacillus malaria it is claimed to have been discovered, I have no positive opinion. I have seen these bacilli while working in a laboratory in the year 1882, but I have no opinion as to its pathological value.

The subject of bacteriology is, I believe, in spite of all jokes that are cracked against it, constantly finding more favor with the profession. If there is anything positive in medicine—if there is anything certain and mathematical, it is this—it is more positive than all the outside experiments taken together. Take, for instance, the typhoid fever germ: the bacteriologist is never satisfied with simply demonstrating that the parasite exists in every case of typhoid fever. He tries to isolate it by means of the blood culture, and thus he takes a small quantity which has not been mixed with any other by putrefaction. He takes that germ and plants it in a soil where it is protected from the influence of the atmosphere, where the atmosphere is constantly purified or filtered. He plants it there and raises it, and then he innoculates it into the proper animal; that is, into an animal that is susceptible of the normal circumstances of the disease. If he then finds that this germ produces the very same disease with the very same symptoms, and then afterward finds from a *post-mortem* examination that the same pathological lesions are there, then he at least is sure that he has to deal with these specific germs of infectious disease. This can not be said of typhoid fever as yet; we do not know of an animal that is susceptible of typhoid fever; therefore all the experiments that have been undertaken so far have failed in this respect; yet we are sure that we have in typhoid bacillus a specific germ because it occurs in every case of typhoid, and because it is just that germ, for instance, which causes the inflammation of the spleen. You can not cultivate it out of every case of typhoid if you puncture the spleen and plant it. It has about the same diagnostic effect, and we are not sure of either, but we know the absolute diagnostic value; and I repeat again that the time is not far distant when we can make a differentiated diagnosis of typhoid fever.

Dr. Meisenbach.—I hope some one will call attention to the fact that at the present time the surgical mind is engrossed with placing laparotomy, for perforation of the bowels from typhoid fever and other diseases, upon the same standpoint that laparotomy occupies in gunshot wounds; and why should not perforation of the bowel or injury by foreign substance be treated by laparotomy? Now if by laparotomy in gunshot wounds we make the chances of the patient for recovery so much the greater, it must be one of the questions in perforation of the intestines in typhoid fever and other cases that produce perforation. I think the operation has been performed several times in London and also in Philadelphia. I am not able to give the names of the operators in London, but Dr. Morton in Philadelphia has performed on a number of cases. Of course the practice in these cases is entirely different. In the one case you have a patient to deal with who is in ordinarily good health, while on the other hand you have a patient to deal with who is run down by disease of long standing. Yet by the operation of laparotomy the percentage of recovery can be increased, and I believe firmly that the time will not be far distant when laparotomy for such cases will be placed upon the surgical pages as one of the legitimate operations in surgery.

DR. LUCAS.—I am in favor of calling typho-malarial fever and typhoid fever one and the same disease. I am in favor of giving quinine, on the ground that if it does not do any good it does not do any harm.

DR. FITZGERALD.—I do not believe in typho-malarial fever; I think it is a misnomer. I think a great many of our intestinal hemorrhages are due to the immense doses of quinine given to control the fever. I used to give big dose of quinine and I very often had funerals: I have quit using quinine as a curative measure, and I do not have any more funerals. I shall have to thank Dr. King for putting the brakes on me. I had been groping around in the dark until it was recommended to use the cooling bath. I did not know what was meant. I had an idea it ought to be cold water, but this was qualified by saying warm water was wanted, and since that I have been using the cooling bath made of warm water.

The other point I wish to speak about is one that occurred in a case four or five years ago. A colleague of mine wrote an article upon the propriety of performing laparotomy in intestinal hemorrhage consequent upon a perforation, and he was hooted down and laughed at in our society; and I got up and said: "Gentlemen, mark my words—in less than ten years—in less than the next decade, laparotomy will be performed in typhoid fever cases. Now I say the forewarning was given here to-day, and I think that before a great while it will be practiced in the proper cases. I do not pretend to say it will save every case; I do not pretend to say that every case of perforation should be operated upon. Every one is suppose to exercise some judgment in that matter; but there are cases, and have been cases, that possibly or probably could have been saved by the operation of laparotomy, and the time is coming when we will save more of these cases by that operation, and if the patient dies the doctor will be to blame for it.

Dr. Middlekamp.—I think there are several reasons why quinine should be prescribed in the treatment of typhoid fever. The first one is, when the temperature gets above a certain degree, we are taught, both by theory and experience, that cases are apt to prove fatal, and the indications are the use of antipyretics in the form of cold baths, quinine or antipyrine. Then I would give quinine also as a tonic in the latter stages of typhoid fever. I have passed through an epidemic of typhoid fever, called by some typho-malarial fever, and by others typhoid fever, and I never could see the difference. I call all my cases typhoid fever cases. I agree with Dr. Matthews in the position he takes in his paper, and I also agree with him in the position he took when he said that we should treat mild cases as well as severe cases with a great deal of care. He is right when he says that the patient should be confined to his bed and not allowed to take any exercise whatever, and that extreme care should be taken in his diet in all attempts at cure. Antipyrine is yet on its trial; our experience with it is not yet well established. I have used it in fifteen-grain doses. For instance, in the afternoon when the temperature is high, as is usual in typhoid fever, I give a dose of fifteen grains of antipyrine, and if the temperature does not fall I give another dose, but rarely have to give more than one or two doses each day. I generally find that an hour after a dose of antipyrine has been given, the temperature would fall preceded by a profuse perspiration, and I also found that next day the patient would be in a much more quiet condition. I suppose most of you have read the article by Professor Ziemsenn, of Germany, who claims he has given antipyrine in at least three hundred cases, and speaks of it as in his judgment much superior to quinine. It does not produce the unpleasant effects that we generally find in the use of quinine. I think it certainly wrong to proscribe any remedy so valuable as quinine. I do not claim that it is a curative remedy in typhoid fever, but there are conditions, for instance in high fever or high temperature, in which it would be criminal if we did not use the remedy. Certainly when a man is burning up it is our duty to reduce the temperature and use it. It may have only a temporary effect, but it is our duty to produce that temporary effect, and if it occurs the next day we should use the same again.

DR. MATTHEWS.—I want to say that in preparing this paper I noticed the fact that laparotomy had been advised as one of the remedies or one of the methods of treatment of perforation of the bowels in typhoid fever. I want any gentleman in this room, whenever he has a case of typhoid fever which has resulted in perforation, in private practice, and he gets the consent of the friends to make a laparotomy in that case, I want him to let me know. Their consent can not be gained. The reason, good sense and judgment of the patient's friends are against it. Now, I will admit, if you have a pauper in the hospital and he has perforation, I will admit there is no obstacle in making a laparotomy; but I think when laparotomy is made, it will be a death certificate when the final report comes in. Now, so far as hemorrhage in other fevers than typhoid is concerned, as has been explained by Dr. Shauffler, that question is not in discussion to-day, and if we had a case of congestive fever in which hemorrhage had occurred, we could account for it readily, as we meet them in practice; but I tell you the facts are, that in fevers of malarial origin as we meet them in practice, we do not find hemorrhage, we do not find peritonitis, I mean we do not find perforation. We may have hemorrhage in certain cases, and in my mind when a practitioner has a case of continued fever in the Southwest, running an uninterrupted course for ten days or upward, and he has perforation as a result, to my mind he is absolutely certain in diagnosing it as typhoid fever, and if a *post-mortem* was held the characteristic of typhoid would be found.

DR. JOHNSON.—Having seen one or two disastrous cases of hemorrhage in typhoid fever, or so-called typho-malarial fever, I wish to call attention to the use of gallic acid, having used it in cases of hemorrhage in typhoid fever. A little reflection will show the advantages of it. Tannic acid has a different action. A number of cases of hemorrhage occurred in an epidemic of that disease, and all of them that came under my observation after the use of gallic recovered. It has an agreeable taste; it is pleasant to take, and it does not derange the stomach at all; there is no objection to taking it, and it is found an agreeable and desirable remedy.

Selections.

Treatment of Septic Infection of the Extremities.

BY H. R. WITTWER, M.D., HOUSE SURGEON, COOK COUNTY HOSPITAL.

ALTHOUGH rapid progress has been made in the last few years regarding pathology and treatment of the various wound infective diseases, still the average practitioner hesitates in carrying out the treatment laid down for those diseases.

The above statement will be borne out by a few cases which have recently come under my observation at the hospital.

CASE I.—John J., æt. 41, clerk, entered the hospital with the history of having been bitten by a dog four days ago. He tells us that there was a moderate amount of bleeding from the wounds in the next two days, and the only attention he gave them was to tie some lint around the hand. On the third day he observed a commencing swelling of the hand, with a diffuse redness around the wounds. He experienced a sense of tension with pain, which increased from hour to hour. On the fourth day an examination revealed the patient extremely nervous, due to prolonged alcoholic excess as well as fear of hydrophobia. His hand was swollen to a moderate extent and the wounds showed necrotic tissue on their surface, together with a diffuse redness, especially marked over the hypothenar eminence of the affected hand.

The treatment in this case consisted in curetting the punctured wounds, washing them with solution of bi-chloride of mercury (1-2000), and applying a wet boric acid dressing for forty-eight hours, and then resorting to a simple dry dressing. The patient left the hospital on the sixth day in good condition.

The medical treatment here consisted in administering frequently doses of a mixture of sodium, bromide and chloral.

CASE IV.—Michael W—, æt. 24, employé at the stockyards, applied for admission to the hospital April 18, 1889. Upon inquiring into his history and then comparing this with the history given by a friend of the patient, it was found that he (the patient) was very unreliable in the statements concerning his condition and only faintly remembered the facts of the case. The following, in short, are the statements made by a friend who witnessed the accident. On Friday afternoon, April 12th, about one o'clock in the afternoon, the patient, in company with a fellow-workman, was busily engaged in unloading lard, the implements in use for that purpose being forks. Accidentally the fork entered his hand on its palmar surface immediately behind the base of the index finger. Four hours after the accident the hand was so painful as to necessitate his discontinuing work, whereupon a druggist's advice was asked concerning the condition of the hand. This latter recommended the use of a poultice. This treatment was persisted in with a gradual aggravation of the symptoms until April 16th, when a physician was called to attend to the case. At this time the pain was excruciating, the swelling had extended above the wrist and the hand was in a state of constant semi-flexion. Instead of resorting to the proper measures after a continued use of the poultice for four days, the condition of the hand growing worse under this treatment, it was considered right to keep on with those measures. On the following day the pain was unbearable and the doctor lanced the hand on its dorsum and palm, with only a negative result, however, bloody fluid being the only thing that escaped from the incisions. On the evening of the same day the symptoms began to assume such a grave character that a second physician was called, who advised the patient to go to the hospital at once. His advice was disregarded, however, until the morning of the next day, the only treatment which the member received meanwhile consisting of a poultice extending from the hand to the shoulder.

I saw the patient soon after his admission to the hospital, and found him suffering from an acute form of sepsis which was rapidly depressing his vital powers, and the continuance of which would almost certainly have resulted in his death. His temperature at this time was 101.5° F., his pulse was feeble, rapid, irregular, in number 140, his body was covered with profuse perspiration, his countenance denoted anxiety, he was pale and his features were pinched. His suffering was extreme, which fact was plainly shown by his outcries when even an intention was shown to touch his arm. After the removal of the poultice the member presented the following appearance: From hand to shoulder particles of flax-seed could be seen covering the skin. Aside from the odor of the flax-seed a distinct odor of decomposition could be detected. In the palm of the hand a dirty looking lacerated wound, covered with necrotic tissue, came to view; numerous bullæ containing clear and bloody fluid covered the dorsal aspect of the hand. The arm, forearm, hand and fingers were enormously swollen, tense, red and tender. Pressure in the axillary region disclosed enlarged and exquisitely painful glands. Along the inner aspect of the arm, close to the shoulder, where the skin had not been macerated by the poultice, distinct red lines could be traced to the axillary space. Sensation was present in all the fingers except the first, in which also circulation seemed to be very poor or entirely absent. Pressure on the hand disclosed the presence of pus in the same by its escape through the wound above mentioned. The condition of the member was a deplorable one, and the prognosis was but little promising.

OPERATION.—The patient was immediately anæsthetized and the parts treated in the following manner: The bullæ were incised and emptied of their contents; the macerated and detached skin about the hand and fingers was removed by the scissors. Long and free incisions were made parallel with the axis of the arm and forearm in various places, and the pus, which had forced its way to the elbow, allowed to escape. The hand was also freely incised and the wounds were thoroughly curetted with a large sharp spoon. Light drainage tubes were then introduced in different positions and the part freely irrigated. The member was loosely enveloped in gauze saturated with boracic acid solution, then placed in a sling so as to elevate it and constant irrigation of hot iodine solution (of a light cherry color) instituted. The dressing was changed once every twenty-four hours, the irrigation being continued for five days. During the latter part of the operation the patient was pulseless, and for several hours afterward his condition was one of extreme shock, so that his recovery was very doubtful. Judicious and abundant hypodermatic stimulation succeeded in restoring the heart's action sufficiently so that eight hours after the operation the pulse could again be counted at the wrist. In the six succeeding days the pulse varied from 140—100. The temperature ranged varying from 103.4° F. immediately after the operation to 99.8° F., depending somewhat upon the facility with which the pus was allowed to drain. The drainage was removed day by day as deemed advisable and the arm dressed at short intervals. In the course of the disease the index finger completely sloughed and had to be amputated at the metacarpo-phalangeal articulation ; extensive sloughing of the extensor tendons also occurred, thus exposing the wrist joint on the dorsum of the hand. The constitutional state of patient is improving every day, but the ultimate result as to the usefulness of the member will of necessity be a poor one. A deformed hand, a stiff wrist, and an arm limited in its motions to a considerable degree, will be all we can promise the patient, aside from having saved his life. Let us remember, however, that, considering the severity of the case, this is a very fortuuate result for the patient. I hope this case, at least, will serve as a warning, and put every one on his guard who deals with, and is called upon to treat, such cases at an early date of the disease.

I wish more particularly to call attention in this article, not to wound infection due to neglect of the aseptic and antiseptic principles, as much as to the treatment of insignificant looking lesions inflicted by all imaginable objects, which lesions are, as a rule, neglected, and therefore prove to be the source of much anxiety and sorrow to the physician. It is not necessary for me to repeat what has been dilated upon so extensively, that any object, such as knives, chisels, cans, hatchets, butchers' implements, etc., may or may not be what we term surgically clean, and that, therefore, wounds inflicted by them should be treated with the utmost care and scrutiny. It is just as important, however, to consider the part affected with such a wound, for we are well aware of the fact that a bad result in the treatment of such an injury implicating the foot would be of less consequence than one involving the hand or any portion of it. It is not my object to endeavor to explain what we mean by surgical cleanliness or uncleanliness, nor do I propose to demonstrate what class of microbes are introduced into the system by a dirty instrument. May it suffice to say that from the most minute lesions we often observe serious consequences both as regards the condition of the part affected and the life of the patient. It is not only our duty to care for a simple wound of this kind as much as we would for some larger operation, but it is a criminal offense to apply an ordinary dressing to it, let the patient go home and tell him that everything will be all right.

It has fallen to my lot within the last two months to observe several of these cases, hence this article.

Septic processes were among the first to excite interest in the part played by micro-organisms in disease, and it is due to this fact that so much has been said and written on septicemia. We must consider in the treatment various degrees of sepsis, the degree depending principally upon the mode of infection and the extent to which the disease has advanced at the time we are called upon to treat it.

The methods of infection, as we are told, are various.

1. We may have a variety in which there exists no apparent external evidence of infection, although some authors claim that even in such instances, at some time or other, an abrasion existed through which the germs were introduced, there remained latent, and at some future time, owing to a trauma, a *locus minoris resistentiæ*, being thus formed, the germs found a good culture ground upon which to develop. An instance of such a method of infection is the ordinary whitlow or felon.

2. A second method of infection is that occurring through the mucous membranes, both respiratory, gastro-intestinal and genito-urinary; the intestinal, according to most authors, being by far the most frequently involved.

3. The third method, the one which interests us most, is the one in which a distinct infection *atrium* can be observed, through which the germs are directly introduced and from which the systemic infection takes place. It should be our duty therefore to look for such sources of infection, and to watch them closely once they are detected. The intensity of the sepsis depends somewhat on the material introduced and on the manner of its introduction. We will not here enter into the minutiæ of naming the different microbes which are the causation of such a septic infection; let it be sufficient to state that the size and depth of the opening made by the offending object aid materially in our knowledge of the course of the disease. If the opening be superficial and the fluids find a free exit through it, the damage done to the part will of necessity be much less than if the wound of entrance be small and deep, and practically closes after being inflicted, either by the natural resistance of the part or by tissues being pushed into the wound, so that it gives the fluids no chance for escape, but rather favors their diffusion through the cellular tissues.

This is especially true when mixed infection takes place, as is usually the case in such instances. The pus, then, instead of finding its way to the surface, is encased in a tough, somewhat elastic membrane,—the deep facia of the extremities,—dissects its way in the direction of least resistance, along muscles and tendons, etc., and therefore produces in a short time an enormous detrimental effect, which quite often results in complete non-use of the part, and in some instances in the loss of the member affected. Disregarding, then, the intensity of the putrid material introduced, we naturally conclude that the location alone is sufficient to give us a clue to the ultimate results in the same.

In this connection it may be worthy of mention that not only the intensity of the putrid material introduced differs, but that the resistance of each patient to this material so varies as to render some excessively susceptible to but slight injuries, while, on the contrary, others suffer but little inconvenience from even extensive lesions. I know at present a young physician who, very fond of pathological work, spends a great deal of his time in the post-mortem room, and who consequently suffers from a mild form of recurrent sepsis. It is not at all unusual for him to have a series of abscesses every month or so, which yield to no treatment unless he frees himself entirely of such work, and which are almost sure to return provided he persists in his close confinement to the post-mortem room. It is also worthy of note that this gentleman is especially susceptible to cases of purulent peritonitis, cases which have no detrimental effect on his colleagues who conduct the examination, but which invariably induce a lymphangitis in him, provided he manipulates the parts or organs affected with such inflammation.

It is also well to know in this connection that certain conditions of the system so impair the resistance of the body to such influences that even the slightest abrasion soon undergoes inflammatory changes. As an instance of such a condition, all chronic inflammatory conditions of the tracheal and pulmonary mucous membrane can be mentioned, an ordinary cold being the most common and familiar example. Here the inflammatory trouble so reduces the system in general that a systemic septic infection, or even a simple local infection, easily gains ground; on the other hand, is it not only possible but probable that this same chronic or acute mucous membrane inflammation so alters its resisting power to external influences that germs easily gain entrance and there find the sought for culture ground.

TREATMENT.—As to treatment, it is now clear what should be done, having taken into consideration all the points just discussed. The character of the offending material should be inquired into, and the location of the wound sought for; it is a safe proceeding, as a rule, to cut down to the bottom of the wound, scrape it with a sharp curette, disinfect it with almost any good antiseptic, and to introduce good and free drainage. Should suppuration then take place, the pus will at least find an exit and can do no subsequent harm. If you are certain that the wound is aseptic, and if at the time of this treatment no signs of inflammatory trouble exist, a dry dressing may be applied with safety. Should sufficient time have elapsed for a commencing cellulitis and lymphangitis to develop before you see the patient, then the after-treatment of the wound must consist in the application of a wet dressing so-called for 24—48 hours (bichloride or boracic acid), not before having freely opened and cleansed the wound, however. In ordinary cases, seen by the physician in time to avoid complications, medical treatment is only rarely called for. In graver and more serious cases, as in Case IV. just mentioned, the tonic supporting and stimulating treatment must be thought of, and only the combined effect of the medical and surgical care in such cases will enable us to save the patient from a fatal termination.

In all this time it will be noticed by the reader that the use of the poultice has not been mentioned. In this connection, having now given the general rules for treatment ordinarily called for, I would warn the practitioner from making use of one method of dealing with such injuries, and that refers to the treatment with the poultice. It is true that the laity favor, in a great majority of instances, the continued application of the poultice; but more than that, they even refuse to follow the physician's advice, preferring to keep on poulticing. I should certainly discourage such a practice, both for the benefit of the patient as well as for the protection of the doctor. Every day of surgical practice, almost, we find the poultice doing more harm than good, not because a poultice is not beneficial when properly applied, but because made use of in improper places, at uncalled-for times, and by the ignorant advocates.

In infective wounds, the character of which we have just been considering, the harm done by the poultice is even more pronounced than in the other instances, because, while hiding the part from the eyes of the diligent observer, the suppurative process continues uninterrupted, and the damage done is irremediable when once the patient reaches the hands of the physician. The poultice in such instances is detrimental in more ways than one. The heat and moisture which it emits, and which act so kindly in a great many instances, here become almost a curse, because they are the conditions most favorable for the formation of a good culture ground.

Knowing then that in infected wounds of this character a poultice can be the cause of such a deleterious result, let us resort to the following means of avoiding its lavish use: Let the physician be the proper judge as to the use of the poultice, or let him absolutely refuse to treat the case.—*North American Practitioner.*

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On the Modern Views of the Etiology of Rheumatism, With a Clinical Consideration of the Treatment of the Same.

BY LEONARD WEBER, M.D., NEW YORK.

IN preparing myself for the opening remarks of a discussion on the above subject, before a recent meeting of the German Medical Society of this city, I found not only a good deal of interesting material in recent publications, but also some valuable clinical observations recorded in my note-books, and thought it might be well to elaborate these matters in the subsequent paper.

Inflammatory rheumatism—polyarthritis rheumatica—is known to us as a disease well characterized by fever, by inflammatory affections of the joints and the heart, and by various complications, and is now supposed to have a distinct etiology and pathogenesis. To the labors of Immermann, Edlefsen, Friedlander, and their pupils, we are mainly indebted with regard to a decided modification of our views of the origin of the disease, and the following data may now be considered as nearly proven:

1. Inflammatory rheumatism is not produced by taking cold; *i.e.*, refrigeration of the heated surface of the body.

2. It belongs to the class of miasmatic infectious diseases, assuming an epidemic-like character at certain times, in so far as we are apt to see a larger number of cases when there is decreasing rain and moisture, while with an increase of the same the number of cases is diminished.

3. Rheumatism is also a house disease, the underground of houses in certain locations being infiltrated with the virus, which will be set free after prolonged dryness, and by the air currents carried into the apartments. One or the other of the three main symptoms of rheumatism may be absent, and yet the affection in question has the same etiology, as, for instance, acute muscular rheumatism, acute endocarditis, acute sero-fibrinous pericarditis, and a good many cases of chorea, though they may not just follow an attack of rheumatic polyarthritis. Furthermore, Immermann has shown us a masked form of rheumatism, presenting itself in the shape of neuralgia of the trigeminal, sciatic, spinal accessory, or other nerves. In March last I had a gentleman under my care who, having repeatedly suffered from gout and rheumatism, had at that time an exquisitely painful affection concerning the left spinal accessory and branches of the fifth pair, associated with slight febrile motions. I failed to relieve him until I gave him the alkaline and salicylate remedies in large doses, when he rapidly improved and got well.

Edlefsen goes further than Immermann, and says that all neuralgias, with the exception of those caused by diseases of the central nervous system, syphilis, meningitis, or intermittens--have an etiology in common with articular rheumatism. Urticaria is considered of specific rheumatic origin by Friedlander and some other authors, but I do not remember more than very few cases of this affection which showed themselves amenable to anti-rheumatic remedies in my hands; while the majority appeared to me of neurotic origin, requiring constitutional treatment, and proving more or less refractory at that, particularly as far as the subacute form is concerned.

With regard to scarlatinal rheumatism the opinions are as yet divided—Immermann and others believing the scarlatinal poison to be also the cause of the joint affection, Edlefsen and his followers considering scarlatinal rheumatism to be articular rheumatism, so that a mixed infection would be present in such a case.

Among the many cases of scarlatina that have come under my observation, there have been so few of them associated with articular rheumatism that, by this somewhat negative experience alone, I am inclined to believe in the identity of scarlatinal and articular rheumatism. And further than that, rheumatic diseases had occurred in some of the houses where I saw such complications, and the usual anti-rheumatic treatment was of good service in relieving them.

It would appear from the above views that the field of rheumatism has been rather enlarged; but we shall not find it so, if we come to separate from it a number of diseases which do not belong to it any longer. First of all, the many painful affections of the locomotor apparatus, some neuralgias and paralyses of motory nerves—particularly of the facial—which may be, and often are produced by a rapid cooling off of the surface of the part in question, and eminently so when that surface has been hòt and perspiring. Erb and Immermann propose to use the word *refrigerate* in designating all such cases, which have thus far been erroneously called rheumatism. Refrigeration is the most important, if not the sole factor in their etiology, and when we speak of refrigeratory myositis, or myalgia, or facial paralysis, we know exactly what we mean by it.

And we have further to expunge from the chart of rheumatism the painful affections of the muscles after severe exertions (Robin's pseudo-rheumatism), the rheumatoid complications of gonorrhœa, chronic bronchitis—bronchectasie, hæmophilie—all of which are due to poisonous influences different from that of rheumatism. Also rheumatoid purpura, or s. c. peliosis rheumatica, as shown already by Senator ("Ziemssen's Spec. Path. and Ther.," vol. xiii., 1, p. 62). I have seen a case of severe and widely spread purpura in a man fifty years of age, associated with inflammatory hypertrophy of the liver, that ended in cirrhosis, of which he died; another with chloranæmia, in a hard-working girl, twenty-two years of age; another with mercurialism, in a syphilitic man, thirty-six years of age; a number of them of very moderate extent and severity in neurasthenic and anæmic persons, but I have not had a case in which anti-rheumatic treatment has been of any service. The pains in the limbs and around the joints in such cases are due to œdema, and the more or less cachectic general condition, but not to rheumatic inflammation.

Bacteriological research has not succeeded in advancing our knowledge as to the etiology of rheumatism, but more has been learned by observations of another kind, for the origination of which we are indebted to Edlefsen. In a paper read before the Fourth German Congress for Internal Medicine, in 1885, he argued pretty conclusively that the theory of the influence of cold (refrigeration) was untenable with regard to rheumatism, and showed that while there was decided connection between the mean temperature of the months and the frequency of laryngitis and bronchitis, the existence of the same connection could not be maintained as to articular rheumatism; and he further proved that the number of cases of rheumatism become less as rain and moisture increase, and more with the decrease of the same, and that pretty frequently a series of cases would occur in one and the same dwelling, and the adjoining houses in particular streets. These observations would show that inflammatory rheumatism is a miasmatic infectious disease, that its virus is of an organic nature and often has its lodgment in the underground of dwellings. These statements were supported at the time of the discussion of his paper by Jürgensen and Friedlander; later on, by Hirsch, Mantle, Feltkamp, and others. My own records show that the greater number of my cases of polyarthritis rheumatica occurred in February and March, and again in the hot and dry summer months. It might be said that butchers, grocers, marketmen and saloon-keepers, for instance, which form the majority of the cases I treated, are just the persons who are more exposed to cold than others, and that alone might account for their rheumatism on the basis of the old theory; but they are also the persons who carry on their business, and frequently live in dwellings which are habitually damp, and the underground of which furnishes, in a most luxurious way, the conditions required for the development of the rheumatic poison. In a similar way the frequency of rheumatism among sailors could be explained.

To be sure, frequent exposure to cold and its consequences might create a predisposition to rheumatism, just as we know well-observed cases where acute rheumatism broke out after a sprain or distortion of a single joint.

If we accept the modern view of the etiology of rheumatism, and put it into the group of the miasmatic infectious diseases, to which it apparently belongs, it will not be difficult to work out a general idea of the pathogenesis of the disease. There is a virus present in the circulation which in one case attacks principally the joints, the endo, and the pericardium; in another, the muscles; and in another, the nerves, etc.

Therapeutics.—Among the many valuable remedies with which modern chemistry has presented us, salicylic acid stands in the foremost rank, and its therapeutic powers in inflammatory rheumatism may be considered as great as those of chinin in intermittent. Many of us prescribed the alkaline treatment in the early period of our practice, basing it upon the lactic-acid theory then in vogue, and combining the same with the free use of chinin to control the rheumatic fever. And the results obtained, were they generally unsatisfactory? By no means. The great majority of the patients got well; but more of them so treated drifted into the subacute stage, or acquired endocarditis, leading to valvular disease, or died of hyperpyrexia, than of those that are given the salicylates in the proper way. Experience has taught me that salicylate of soda, mixed with its bulk of bicarbonate of soda, is borne better by the stomach than the salicylate by itself, while it loses none of its efficacy. For a number of years, therefore, I have prescribed, in acute rheumatism, fifteen grains of each salt to adults, and one-half of that to children, every three hours during the day, and the night also in severe cases, until the temperature and pulse became normal, and that very generally was the case on the third or fourth day from the beginning of the treatment. Dr. A. Seibert, of this city, a careful observer, to whom we are also indebted for collecting some valuable statistics which appear to confirm the theory of the miasmatic-infectious origin of rheumatism, prefers giving the salicylate every hour, in order to overcome the action of the rheumatic virus as soon as possible. When he finds the stomach intolerant to the remedy, he introduces it by the rectum, and gives it, in children's practice, always that way. He reports to have seen many cases in which pulse and temperature became normal, and the joints free from pain and swelling, in a day, and considers this method perfectly safe and satisfactory. Now, although the salicylate is a great remedy, it is neither omnipotent nor can it be administered in every case with safety and comfort. I have had to deal with many a case in which the head and stomach would not bear it, or a weak heart would soon forbid its use, and others in which it did no good.

There are some observers who have used antipyrin, or antifebrin, or oleum gaultherii in such refractory cases with confidence and success; have even gone further and laid aside the salicylate, and operated with the remedies just mentioned in preference to the standard one. I regret to say that my experience with them in rheumatism has not been such as to induce me to praise them highly. Whether my failure was due to want of patience or want of courage to give them in large enough doses, rather than to the inefficacy of the remedies, I do not care to inquire into now, but am ready to throw these three, and the phenacetin besides, overboard for salol, a compound which has yielded me very good results in cases where the salicylate failed to act or could not be continued. To illustrate by an example. Mrs. S——, aged thirty-six, quite stout and rather strong, pulse regular but weak, heart apparently sound, had inflammatory rheumatism some six years ago, being laid up with it for eight weeks at that time. In March last she was taken with pneumonia of regular type, of which she recovered completely in the course of the second week, and two or three days thereafter quite an acute attack of inflammatory rheumatism set in, with high fever and all the other usual symptoms, except endocarditis, of which there was no sign at any time of the four weeks during which she was confined to her bed. The salicylate given during the first week failed to cure, and likewise antipyrin and phenacetin given in the second week. The alkaline remedies, ordered in large doses, in conjunction with the tincture of colchicum all during the third week, brought some relief, but did not prevent relapse and extension of the disease to some joints of the upper extremities at the beginning of the fourth week. I then gave of salol fifteen grains every three hours, *i.e.*, five times a day, and had the swollen joints blistered *coup sur coup*, and the patient carefully nourished and stimulated. At the end of the week she was relieved of all troublesome symptoms. I continued the use of salol, *refracta dosi*, for another week, when she was discharged cured.

It would be easy to add five or six cases more of a similar nature, but this would be needless supererogation. I prefer to say a few words more of the comparative frequency of relapses of acute rheumatism, the subacute forms, and those cases in which the disease settles, so to speak, in one or more joints, invalidating or crippling the patient. To expect here to cure by a prolonged course of the salicylate or salol, or another of the modern specifics, would be a vain hope indeed, and end very probably in disappointment to both physician and patient. A great deal can be accomplished, however, and many a case cured by a bold but judicious and prolonged use of the alkaline treatment, with the iodide of potassium in every case where the stomach will take the latter, no matter whether there is a combination with syphilis or not. I have found such treatment very good in rheumatism concerning fat persons, and those bloated with malt liquors when they had not yet anæmia and weak heart. Where the later complication is associated with rheumatism it is good practice to improve the patient's condition by appropriate general regimen and the exhibition of the muriate tincture or other preparations of iron in large, and digitalis in small doses, and then proceed with specific treatment, prolonged warm baths—natural or artificial—change of air and domicile when there is cause for it, sea-voyages, and the like.

To cite one or two cases may be sufficient for illustration. Mrs. W——, aged thirty-four, had rheumatism for about two years before I saw her in 1884. There was no valvular disorder, but one wrist, shoulder, and knee-joint were the seat of an old exudation, more or less swollen, and distorted and painful, and the patient was scarcely able to be about, and quite unable to do her work. Beginning with a short course of the salicylate, which I am in the habit of doing in almost every case, and generally with some benefit as to recent exudation in old cases, I followed it up with a solution of iodide of potassium and liquor potassæ, which the patient used steadily for nearly six months, when she was free of rheumatism, looked well, and had the use of her limbs as good as before. Her means were such that reasonable care and good food could be provided; but nothing in the way of baths, change of air, or other adjuvants to assist the action of the remedies. Syphilis was not present. Further, I was consulted by a gentleman, some years ago, who suffered in a similar but more pronounced way, and in whose case syphilis could be also excluded. He said he had all the necessary remedies, and enough of them, would take no more drugs, but was ready to follow any other good advice that I might be able to give him. I asked him if he was a good sailor, and upon receiving an affirmative answer I suggested a prolonged sea-voyage in a sailing vessel. He did not relish the idea of being on board of such craft, but immediately engaged passage on a slow but comfortable steamship line, and crossed and recrossed the Atlantic six times in the course of the summer, when he considered himself cured. On his third voyage he was already able to walk the deck without support, and had good use of his limbs during all the others. However, even after an apparently perfect restoration from chronic rheumatism, the proneness to relapse remains, and the patient, if not already taught by experience, ought to be informed of it, as he will then be more readily inclined to undergo a further course of treatment, which need not be long when begun without delay. Immobilizing dressings I have often used in the subacute form of rheumatic joint affections, when I found much tenderness, swelling, and gelatinous exudation that would not yield to medical treatment. Such appliances were always productive of great comfort to the patient, never did any harm, and very often favored absorption and helped to cure. Blisters over the joints in the acute, relapsing, and subacute forms—an old mode of local treatment, by the way—I have been taught by experience in numerous cases to value highly, and never hesitate to apply them wherever the exudation does not quickly yield to medicine. The ice-bag I have never ordered to be laid over a joint inflamed acutely by rheumatism. I have never seen any good accomplished by it, but remember a few cases in which the rheumatic disease appeared to linger in the very joints which had the ice-bag on.

That a great many joints, more or less diseased and quite unfit for use by chronic rheumatism, have been improved and cured by massage and medical gymnastics applied by experts, there is not the least doubt. But there still remain a number of chronic cases in which such an amount of mischief has been done that various joints may be in a more or less disorganized condition, crippling the unfortunate patient for life.

In the experience of Dr. F. Lange, of this city, a number of cases of this kind have come under his care, in which by inquiry failed to elicit any other cause but rheumatism for the contracted joint-lesions, and in which more or less surgical treatment was required to afford relief.—Med. Record.

Remarks on the Treatment of Pulmonary Phthisis.

BY J. C. WILSON, M.D., OF PHILADELPHIA.

LECTURER ON PHYSICAL DIAGNOSIS, JEFFERSON MEDICAL COLLEGE, ETC.

UNTIL the present decade, no theory adequate to explain the facts in regard to the origin and nature of the tuberculous diseases, and especially of pulmonary phthisis, had been advanced. One hypothesis after another had been advocated only to be abandoned, leaving a heritage of erroneous views and misleading phrases to encumber the general stock of information. Pathologists, in their eagerness to cope with the most grievous scourge of modern civilized life, generalized upon insufficient data. The progress of knowledge in regard to this group of diseases was, therefore, slow and halting. It consisted chiefly in the accumulation of facts, among which there can be found neither coherence nor relation. Many of these facts, collected with untold toil, are to-day without significance or value, except to over throw the views for the support of which they were gathered. When all was said, it seemed as though the progress from the time of Laennec to 1882 was scarcely worth mentioning. To-day it appears to many of us to have been no progress at all.

Koch's discovery of the tubercle bacillus, and his demonstration of its causal relation to the tuberculous diseases, mark an epoch in medical history. Since that time scientific research has taken the place of ingenious surmise, and the evolution of a theory constantly supported by new and interdependent facts has gradually illuminated the darkness that overspread the subject of tuberculosis. It is true that there are yet obscure corners and unsolved problems. The present is a period of transition. But the confusion of the present has this advantage over the chaos of the past: there is a hopeful prospect that out of it will evolve order.

Let us regard pulmonary consumption in all its forms as a type of the tuberculous diseases.

This much may be safely predicated:

Pulmonary consumption is an infectious disease, due to the implantation and development of the tubercle bacillus in the lungs of a susceptible individual.

It is of advantage to present this proposition in its simplest form. It follows that the tuberculous diseases of other organs are infections, likewise due to the access and development of the tubercle bacillus. The pathogenic unity of the tuberculous diseases and the primary localization of the process are obvious deductions. The overflow of local collections of tubercle bacilli, or of matter laden with them, by way of continuous surfaces or perforating lesions, explains the extension or the generalization of the process; thus, for example, from one lobule to another, or to another lobe, or to the opposite lung, or the larynx, or upon deglutition to the intestine, or, again, by the erosion of the capsule of a lymphatic gland, to a bronchus, or into a vein, with the production of acute general tuberculosis. But acute general tuberculosis is a rapidly fatal disease, presenting strong points of resemblance to the specific fevers, especially to to enteric fever. Let us confine our attention to the local lung disease. If it be local, how are we to account for the constitutional symptoms?

The results of recent researches in the field of the chemistry of the infections render it in the highest degree probable that many of the general symptoms of these diseases are not directly, but only indirectly, due to the bacteria which constitute the infecting principle. Toxic substances—ptomaines—are continuously evolved during the period of the development of the pathogenic bacteria in the organism. These principles, being soluble in the circulating blood, occasion constitutional phenomena analogous to those caused by certain alkaloidal poisons. Several of these substances have been isolated.

The grave constitutional symptoms which are sometimes associated with circumscribed lesions, the general improvement frequently observed during periods of quiescence on the part of the local process, the disappearance of symptoms in cases where the local process becomes obsolescent, the prolonged fair health which is occasionally seen in individuals with extensive but distinctly encapsuled cavities, all lend support to the view that in pulmonary consumption likewise, not the bacillus itself, but ptomaines which it produces, are the cause of the malnutrition, asthenia, fever, sweating, and other general symptoms of the active disease. That these ptomaines are among the products of the disintegration of tissue elements from which the bacteria derive pabulum is obvious. To arrest such tissue-disintegration would mean, on the one hand, to prevent the formation of ptomaines; on the other, to deprive the parasite of the pabulum necessary to its growth.

The destruction of pathogenic bacteria outside the body, or the prevention of their access, constitutes prophylaxis. Where measures of this kind are efficient, the question of individual susceptibility or predisposition becomes of minor importance. When such measures are inadequate, the prophylaxis must include efforts to render the individual insusceptible, efforts which have been fully realized by vaccination in smallpox.

In broad, general terms, disinfection includes two processes, which, however, are not in all instances distinctly separated, but which often overlap. These are

1. The destruction of germs.
2. The sterilization of organic substances.

The first is a germicide process; the second, an antiseptic process. Measures of disinfection employed in the sick-room and in the treatment of the excreta of the sick are germicide. Here the object is the destruction of bacteria. The processes by which meats are preserved, as by smoking, salting, and the like, and the means taken to preserve pathological specimens and cadavera for anatomical use, are antiseptic. Here the purpose is, not to act directly upon bacteria which may produce destructive changes, but to act upon substances liable to those changes in such a manner as to render them infertile for the growth of the bacteria.

Efforts have been made to utilize both these methods in the curative treatment of disease. In theory one or the other or both of them are available in the treatment of tuberculosis, a local infection gradually extending by the implication and destruction of new areas of tissue, the elements of which are necessary to the growth and development of the bacillus. Superficial tuberculosis is, under certain circumstances, amenable to germicide treatment in the simplest form. Thus the enucleation of superficial tuberculous lymphatic glands and the effectual scraping and disinfection of the surrounding tissues, now constitute an accepted and efficient treatment. The medical history of the last seven years teems with the records of unsuccessful efforts to utilize various germicide methods in the treatment of pulmonary consumption. The apparent early successes of several of these methods are to be explained, partly by the enthusiasm of those who have advocated them from the beginning, and partly by the fact that consumptive patients, especially when congregated together in hospitals, are liable to present misleading evidences of improvement for a short time after the employment of methods of treatment at once novel and having a specious appearance of being scientific. Their failure is due to the fact that the tubercle bacillus is more resistant to germicide substances than the tissues which constitute its natural habitat.

Even in the case of exposed tuberculous ulcers or of pulmonary cavities so situated as to be accessible to germicide drugs, either by inhalation or by direct injection through the chest wall, the bacilli in the surface discharges, or in the accessible curdy necrotic material collected upon the cavity walls, are no longer active in causing the tuberculous process. They are simply admixed with material ready to be thrown off, and are dangerous only in so far as they are liable, by transposition to unaffected tissues, to light up new local processes. The bacilli which are active are deeply imbedded in tissues inaccessible to any germicide which does not, at the same time, involve in destruction the parasite and the structures which constitute its host.

One germicide method only, and that the latest, has not yet been shown to be unsuccessful. It is the method of Weigert, and consists in the prolonged inhalation of superheated air. Whether or not the tissues of the human lung can preserve their integrity, when exposed to air of a temperature ranging from 212° F. to 480° F. sufficiently long to destroy the tubercle bacilli imbedded in them, remains to be demonstrated.

In the antiseptic plan we have a method of treatment likewise based upon the pathogenic rôle of the bacilli. This plan has for its object not to directly destroy the bacillus, but to augment the powers of resistance of the structures which it assails. If the tissue elements can be made to withstand the disintegrating action of the parasite, then the chemical changes by which are elaborated, on the one hand, the nutritive material needed for its growth, and, on the other, the poisons which cause the general symptoms of the disease, would be prevented. To this plan must be referred those methods of treatment which have been generally recognized as beneficial, including measures of hygiene, dietetics, with hyper-alimentation and the administration of fats, pulmonary gymnastics, and climate, the object held constantly in view being such an improvement in the general condition of the patient as to retard or bring wholly to an end the destructive processes in the lungs.

Among medicines, the utility of which has been long and generally recognized, are the preparations of iodine; the preparations of mercury; arsenic; the phenols, especially carbolic acid and creasote.

The members of this group have one striking peculiarity in common, namely, that they are powerful antiseptics. With the exception of the phenols, they belong to the group of medicines known as alteratives; and the question suggests itself, in this connection, as to whether or not their so-called alterative influence is not, to some extent at least, due to an influence which, in long-continued moderate doses, they exert upon the tissue elements of the body in such a way as to increase the powers of resistance of the latter to disintegrating morbific agencies.

Clinical researches is this direction are not without promise. Alteratives of this kind have hitherto been employed simply upon very vague opinions regarding their general influence upon nutrition. If they can be shown to exert a special influence upon nutrition antagonistic to the action of pathogenic bacteria, not only will their usefulness be much increased, but clinical problems relating to the mode of administration, dosage, and effects, will at once engage the attention of practical therapeutists.

The existing methods of treatment are unsatisfactory. Germicide methods have proved utterly futile. The suggestion of an antisepsis that will increase the power of resistance in the living tissues opens up a field worthy of systematic cultivation. Two things are especially needed: first, earliest possible recognition of the local lesions of pulmonary consumption; second, the earliest possible employment of the combined means which have shown themselves in the hands, not of one, but of many practitioners to be useful. These are improved hygiene, dietetics, climate, respiratory gymnastics, and the use of alteratives.

The universal experience of those engaged in making large numbers of post-mortem examinations shows a frequency of obsolescent tuberculous lesions in the lungs, such as warrants a large degree of hope in the energetic treatment of the disease in the stage of primary infection. The conventional disregard of the earliest symptoms, both on the part of patients and physicians, is unfortunate. Far better for the doctor to tell the patient his worst fears at once, and

institute the treatment at a time when the evidences of tuberculous infection are still doubtful, than to temporize until large areas of pulmonary tissue are implicated, and the growing parasite has become a fruitful source of new infection, both within and outside of the body of the patient. ***Phil. Med. News.***

Microscopy.

Microscopic Examination of Blood.

BY MARSHALL D. EWELL, M.D., ATTORNEY AT LAW.

The question whether it is possible to identify a given specimen of blood as human has long been disputed; but with very few exceptions the opinion of experts who have given the subject most attention is that, while it may be distinguished with certainty from the blood of birds, fishes and reptiles, and with a high degree of probability from the blood of some other mammals, there are nevertheless several mammals, and among them the dog, whose red blood corpuscles are so nearly of the size of the red blood corpuscles of man, that it is rash to express an opinion as to their source. Especially is it so when, as is usually the case in medico-legal investigations, the specimen submitted for examination is not fresh blood, but has been exposed to atmospheric and other unknown influences. Nevertheless, there have been in the past in this city so-called experts who have even gone so far as to profess to identify the person from whom a given specimen of blood has been taken.

Again, it is well known that the red corpuscles, even when fresh, vary in character within quite wide limits, so that unless the mean of the measurements of a large number of corpuscles is taken, the results arrived at may vary sensibly from the true mean size, even if it is conceded that in a given person in good health such mean is practically a constant one, a position to support which some evidence exists. An expert, therefore, who would venture to pronounce an opinion as to the source of a given specimen from a measurement of the corpuscles, as is reputed to have been done in at least one case in the past, betrays either gross ignorance or culpable recklessness.

The latest case in which the questions above stated have come before the public is in connection with the case of Dr. Cronin.

The following is quoted from a recent number of the *Chicago Tribune:*

> THE BLOOD EXAMINED BY EXPERTS.—THAT FROM THE CARLSON HOUSE AND THAT FROM THE TRUNK ARE THE SAME.
>
> Dr. Brandt, assisted by Dr. Hektoen, spent the entire afternoon yesterday in carefully examining the blood found on the floor of the cottage and comparing it with that found in the trunk. As a result of the examination two things are established—first, the blood found in the house on Ashland Avenue is that of a human being; second, so far as microscopic examination goes, it tends to prove that the blood taken from the trunk and that taken from the house came from one and the same human body.
>
> "I examined the blood found in the trunk," said Dr. Brandt to a *Tribune* reporter last night, "soon after it was found, and determined that it was human. The first thing to do was to determine whether the spots in the house were also human blood."
>
> "How you can tell whether certain blood is that of a human being or of some animal?"
>
> "Only by the size of the corpuscles. They are large and compressed on either side. It can be done only by means of a powerful microscope, and even with this aid none but an expert can tell. By submitting the blood to this test it was found to be human blood. This settled, the next thing of importance was to find out if the two specimens of blood bore any resemblance."
>
> "Can you tell to a certainty whether two drops of blood come from the same body?"
>
> "You can not; but if they bear certain marks of resemblance, the inference is pretty strong. You must bear in mind that the blood in both cases was taken from wood. That found in the trunk was diluted with water. After diluting the blood taken from the floor of the house sufficiently to make it of the same consistency, or as near as may be, with that from the trunk, we submitted them both to the microscopic test—"
>
> "And found?"
>
> "That the points of resemblance were marked. The pigment crystals were exactly alike."
>
> "From which you inferred—"
>
> "That the blood found in the trunk and that taken from the floor of the house came from the same person."
>
> "Do you think, doctor, that is the blood of Dr. Cronin?"
>
> "There is not the least doubt of it in my mind, and I think the police are of the same opinion. It is almost certain that the doctor's body was in that trunk. If this is so, there can be little doubt that he met his death in the house on Ashland Avenue."

We are unable to vouch for the accuracy of the above report, but, having never heard its accuracy called in question, it is possible that it may be true, though charity would seem to demand that it be received with much allowance from the influence of those unknown factors, the reporter's ignorance and imagination. If it is a correct report, it is certainly the gravest impeachment of the value of so-called expert opinion that it has ever been our misfortune to have met. In the

present state of our knowledge it requires great hardihood to draw a "pretty strong inference" that two drops of blood came from the same body. Indeed, under the conditions stated it is impossible. We can not but hope, therefore, that the above report is incorrect, and the gentlemen named owe a duty to the public and to the profession not to allow such misstatements to go unchallenged.—*North Amer. Practitioner.*

Hunting Yellow Fever Germs.

BY GEORGE M. STERNBERG, M.D., SURGEON U. S. A.

An address delivered by special invitation before the Quarantine Conference, at Montgomery, Ala., March 5. 1889.

GENTLEMEN: It would have been far more satisfactory to you and to me if the subject of my address this evening could have been announced as "The Yellow Fever Germ." I need hardly say that nothing would have given me greater pleasure than, in the presence of the experts in the clinical and prophylactic management of yellow fever here assembled, to exhibit microscopic preparations and pure cultures of the specific infectious agent which I have been so long in search of. I shall show you presently upon the screen photo-micrographs of a variety of micro-organisms which I have encountered in the course of my researches, some of which are hitherto undescribed species, and among them some have especially engaged my attention as possible yellow fever germs. I shall also show you cultures and photo-micrographs of the micrococcus presented to me by Dr. Domingos Freire, of Brazil, as his microbe of yellow fever; of the tetragenus febris flavæ of Dr. Carlos Finlay, of Havana; and of the bacillus of Dr. Paul Gibier, of Paris.

But I must announce to you, in advance, that there is no satisfactory evidence that any one of these micro-organisms is the veritable infectious agent in the disease under consideration.

I at first hesitated to accept the invitation extended to me to address you on this occasion, inasmuch as my investigations have not yet led to any definite result, and as they are still in progress and will be continued in Havana during the present summer. But the importance of the occasion and the solicitation of my good friend Dr. Cochran, the efficient Health Officer of the State of Alabama, have induced me to come here for the purpose of making a brief statement relating to the present status of the investigation with which I am charged, and especially for the purpose of demonstrating to you the methods of research employed by bacteriologists in investigations of this nature.

I may say before going any further, that my faith in living infectious agents as the specific cause of this disease is by no means diminished by my failure thus far to demonstrate the exact form and nature of this hypothetical "germ." The present state of knowledge with reference to the etiology of infectious diseases in general, and well-known facts relating to the origin and spread of yellow fever epidemics, fully justify such a belief. The *a priori* grounds for such faith I stated as long ago as 1873, in a paper published in the *American Journal of the Medical Sciences* (July, 1873); and the progress of knowledge since that date has all been in the direction of supporting this *a priori* reasoning. But yellow fever is by no means the only infectious disease in which satisfactory evidence of the existence of a living infectious agent is still wanting. In the eruptive fevers generally no demonstration has been made of the specific etiological agent—at least none which has been accepted by competent pathologists and bacteriologists. Again, in the infectious disease of cattle known as pleuro-pneumonia, notwithstanding very extended researches by competent investigators in various parts of the world, no satisfactory demonstration of the germ has been made. The same is true of hydrophobia, in which disease we are able to say with confidence the infectious agent is present in the brain and spinal cord of animals which succumb to rabies; this infectious agent is destroyed by a temperature which is fatal to known pathogenic micro-organisms (65° C.), and by various germicide agents, yet all efforts to cultivate it or to demonstrate its presence in the infectious material by staining processes and microscopical examination have thus far been unsuccessful.

You are aware that my first effort to solve the etiology of yellow fever was made ten years ago. As a member of the Havana Yellow Fever Commission of the National Board of Health, I had an opportunity to make researches which, in advance of the effort, I fondly hoped might lead to demonstration alike creditable to American science and useful as a basis for preventive and curative measures in this pestilential malady, which has destroyed the lives of so many of our fellow-citizens, and has so largely interfered with the material progress of certain sections of the United States. I knew, from personal experience, the malignant nature of the disease, and the futility of the various modes of treatment which had been resorted to in the effort to combat it. It was, therefore, with the deepest interest as well as with strong hopes of success, that I went to an endemic focus of the disease to search for the yellow fever germ. The recent (1873) demonstration of the spirilum of relapsing fever in the blood of patients suffering from this disease, and the recognized facts relating to the etiology of anthrax, considered in connection with the current notions relating to the pathology of yellow fever, led me to hope that the discovery would prove an easy one. I was familiar with the most approved methods of mounting and staining micro-organisms, and was provided with the best high-power objectives that could be procured, the one-twelfth and one-eighteenth homogeneous oil immersion objectives of Karl Zeiss, of Jena, Germany. Not only did I feel that I was equipped for the recognition of any micro-organism which might prove to be present in the blood, but I was prepared to photograph it, and thus to show to others what I might see in blood drawn from the circulation of yellow fever patients. You know the result of this investigation; ninety-eight specimens from forty-one undoubted cases of yellow fever were carefully studied, and one hundred and five photographic negatives were made, which showed satisfactorily everything demonstrable by the microscope. But no micro organism was discovered. I shall presently show you upon the screen a photo-micrograph of yellow fever blood, made in Havana at the time mentioned, so that you may judge of the performance of my Zeiss one-eighteenth inch objective, and have ocular evidence that no micro-organism demonstrable by this magnificent lens was present in it. I may say here that my culture experiments, made in Havana last spring, in which blood taken from one of the cavities of the heart, as soon as possible after death, was introduced into various nutritive media, gave a like negative result.

Out of ten cases in which I made autopsies, in the military hospital at Havana, a development of micro-organisms occurred in two only. In the exceptional cases I obtained a bacillus which subsequent researches showed to be identical with a bacillus constantly found in the alimentary canal of healthy persons—the *bacterium coli commune* of Escherich.

The absence of micro-organisms from blood drawn from the finger during life, or from the heart after death, can not, however, be accepted as evidence that there are no parasitic organisms anywhere in the tissues. The bacillus of typhoid fever, for example, is rarely found in the circulating fluid, although it must be transported in the blood current to the various organs in which foci of growth are found which contain numerous bacilli. Such foci are especially abundant in the spleen, but even in this organ many thin sections may be made before a single focus of development is encountered.

Having failed to find the yellow fever germ in the blood, we may still admit that, as in typhoid, it is perhaps only to be found in the organs principally involved in the morbid process. This reasoning has led me to give special attention to an examination of the liver and kidney, both by the culture method and by the examination of thin sections. Both methods have given me positive results, so far as the occasional presence of micro-organisms is concerned, but both are in accord in failing to demonstrate the constant presence of any particular organism. In my culture experiments, made in Havana last year, the micro-organism most frequently encountered was my bacillus *a*, already referred to as found in two out of ten cases in cultures from blood drawn from the heart. Naturally, I have given much attention to this bacillus, and it was only after an extended series of comparative experiments that I gave up the hope that it might be concerned in the etiology of the disease under consideration. These comparative experiments forced me to the conclusion that this is the same bacillus as was found by Emmerich in cholera cadavers at Naples, and that it corresponds with the *bacterium coli commune* of Escherich.

In my researches by the method of staining thin sections of the tissues hardened in alcohol, I have encountered several different micro-organisms; but no one of these has been found in a series of cases. One, the bacillus of Laceda and Babes, I have found only in material brought from Dr. Lacerda's laboratory in Brazil, and in two only out of nine cases represented by material from this source. In one of my Havana cases, in which the material was collected by my friend, Dr. Burgess, in 1887, a long bacillus was found in the kidney, for the most part in the glomeruli. In a case in which I made the autopsy in Havana last spring a micrococcus, grouped in fours, was found in the kidney.

Evidently, if any one of these micro-organisms was found in a considerable series of cases, the fact would be decidedly significant, and would afford presumptive evidence that the parasitic organism found bore some relation to the morbid process. But, even if one and the same micro-organism was found in every case, the final proof of its etiological import would depend upon its isolation in pure cultures, and the production of the characteristic phenomena of the disease in one of the lower animals, or, in the absence of a susceptible animal, in man himself.

The method of cultivation is by far the most reliable for the demonstration of micro-organisms which will grow in our culture media, for isolated cocci or bacilli might easily escape observation when present in small numbers, but would serve to start a culture. Thus the bacillus of typhoid fever, which, as stated, is not as a rule found in the spleen in scattered clumps, may be obtained from this organ in pure cultures, almost without fail, by introducing a small quantity of splenic pulp into a suitable nutritive medium.

Moreover, this method enables us to differentiate micro-organisms which look alike, and by which microscopic examination alone it would be impossible to distinguish one from another. This is a fact now well recognized by bacteriologists, but not generally appreciated by microscopists, whose researches have been limited to the staining and mounting of sections.

Both methods require skill and practice in the execution and great caution in drawing conclusions, for there are a thousand traps lying in wait for the explorer, in this field of investigation. It is for this reason that pseudo-discoveries are so numerous.

Especial care is required in the microscopical examination of stained preparations of yellow fever tissues. One encounters in the urinary tubules, mingled with the débris of the desquamated epithelium, stained masses of various forms which often closely resemble cocci or bacilli. These I believe to be fragments of nuclear material. The same material is often massed in the urinary tubules in the form of plugs, which are deeply stained by the aniline dyes.

Again, fragmentation of the nuclei of cells still in position may give the impression of a cell containing cocci; and the karyokinetic figures found in the cells, especially in the liver, often resemble bacilli so closely that it is difficult to convince any one not familiar with them that they are not micro-organisms.

The "plasma cells" of Ehrlich, also, seem to have as their chief function the *role* of deluding amateur microscopists into the idea that they have made a discovery. They are often very abundant in the liver and in the kidney of yellow fever cases, and so closely resemble zoöglœa masses of micrococci that experienced pathologists have been deceived by them.

In addition to these objects which resemble micro-organisms, there are dangers from the post-mortem invasion of the tissues when the autopsy has been delayed beyond an hour or two, in the warm climates where yellow fever prevails; or even in the preserving medium, or during the process of staining.

My experiments made 1883 showed that "exposure to ninety-five per cent. alcohol for forty-eight hours did not kill the bacteria in broken-down beef tea (old stock)," and pathologists are familiar with the picture presented by the post-mortem invasion of tissues which have been left in alcohol which was not strong enough to preserve them.

Finally, inasmuch as my culture experiments with material collected soon after death, from the liver and kidney, gave a positive result in a certain proportion of the cases, it is evident that the micro-organism most frequently found by this method—my bacillus *a*—should occasionally be encountered in stained preparations.

(*To be continued in next issue.*)

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THE AMERICAN SOCIETY OF MICROSCOPISTS.—This Society met this year at Buffalo. Dr. F. L. James, of St. Louis, was present, and gives quite a glowing account in the *St. Louis Medical and Surgical Journal* of the meeting. Previous to the Buffalo meeting it seems that there were very great apprehensions that it would be the last meeting—several previous meetings having been very poorly attended. "These, and other causes," says Dr. James, "the death of several prominent workers, and the continued disaffection, grown, in one or two cases, into open hostility, made the true friends of the Society look forward to the Buffalo meeting with hope mingled with apprehension. They knew that it would practically settle the fate of the Society for several years at least, and might lead to its disintegration."

But it seems that the apprehensions in regard to the fate of the Society were not realized. "In point of attendance," says Dr. J., "in the number and value of the papers presented, in the interest shown in the discussions, in the extent and value of the exhibits of apparatus, in the number of new members added, in the social features and entertainments, the meeting just brought to a close was all that the most sanguine friends of the Society could have hoped for."

Dr. James then proceeds to give particulars, which we copy in full, as follows:

The attendance as remarked was large. It was especially so in old working members who, from various reasons, have remained away for several years. Several who could not come sent friendly greetings by letter or telegraph, showing that their hearts were there. There were some, alas, whose faces were missed, and who will never again be seen among us. One of these was Henry Mills, himself a life-long resident of Buffalo, and whose death we announced a few months ago. Perhaps no man in the Association was more sadly missed, for in spite of his weight of years, (seventy-six when he died) there was no one more youthful in spirit than he. Allen Y. Moore, of Cleveland, was another who had gone over to the great majority. The death of Charles Fasoldt, Sr., of Albany, is too recent to need to be recalled. Perhaps the saddest loss to the Society was that of a young man, just commencing a career of scientific usefulness—Boardman L. Oviatt, who was killed in a recent railway accident somewhere in Michigan. All of these were duly remembered by the Society by appropriate resolutions.

THE MEETINGS.

When it was determined to hold the annual meeting at Buffalo, the local society of that place, assisted by the Buffalo Society of the Natural Sciences, appointed a joint committee of arrangements of which Dr. Lee H. Smith was chairman and Dr. Lewis Bull secretary, and these, supported by the hands and purses of the members of both societies, made the most complete and excellent arrangements for our entertainment both during work and play hours. The place of meeting was the rooms of the Society of Natural Sciences in the grand Buffalo Library Building—an edifice of sandstone and granite which gives shelter to the Buffalo Academy of Fine Arts, the Buffalo Library Association, with its library of sixty thousand volumes; the Buffalo

Historical Society, also the possessor of a large library of books, pamphlets and manuscripts relating to local and American history, a large ethnological collection and museum of aboriginal archæology; and to some other learned and scientific clubs and societies. Our host, the Society of Natural Sciences, is an institution of which many a larger and richer city might justly be proud. It occupies the entire ground or basement floor of the building, and its large and exceedingly valuable collection of slabs, casts, mounted skeletons and papier-maché copies of fossil fauna, is one of the first things that attracts attention on entering the apartments. The amphitheatre or lecture hall, capable of seating perhaps five hundred persons, and a handsome well-lighted room, is in the center of the suite. From it lead hallways or ante-rooms conducting one to the library of the society (independent of the public library above referred to) and the natural history museum. This latter has one of the most complete collections of the birds and reptiles of America to be found anywhere in this country. The Society met in the amphitheatre and, after the first session, about half filled it.

THE PROCEEDINGS, ETC.

Owing to the lack of space we must defer anything like even a resume of the papers until our next issue. Among them were several of deep interest to medicine, and others of great value to the working microscopist. Scarcely a paper was presented which did not elicit lively and valuable discussion. The working session was also full of points of interest and value, the tables being surrounded during the entire afternoon by crowds of earnest workers. The soirée was an immense success, bringing into the Library building a throng estimated at upward of twenty-five hundred people during the course of the evening.

The election for officers resulted as follows:

President, Geo. E. Fell, Buffalo.

Vice-Presidents, Dr. W. N. Seaman, of Washington, and Mr. F. W. Kühne, of Fort Wayne, Ind.

Treasurer (to fill the unexpired term of Dr. Mosgrove, resigned), C. C. Mellor, of Pittsburg, Pa.

Executive Committee: Dr. F. L. James, St. Louis, Mo., W. P. Manton, Detroit, Mich., and W. H. Walmsley, Philadelphia.

The time and place of next meeting was not definitely determined.

Gleanings.

THE TREATMENT OF CHRONIC HEADACHES.—"Doctor, what is good for headaches?" is a question which pursues the physician from youth to old age, and which he is sometimes sorely puzzled to answer. In the "Transactions of the Medical Society of New York, 1889," Dr. Dana discusses briefly the nature and cure of chronic headaches. The headaches of young children are best treated with small doses of the iodide of iron or the citrate of iron and quinine. In school children advantage is obtained by removal from school, the use of tonics and change of diet. If there is marked visual trouble, glasses should be tried. In some children arsenic is beneficial.

Among adults, brain-workers require different treatment from muscle-workers. Brain-workers are benefited by nervines like antipyrin, caffein and the bromides, and by attention to diet and exercise and to the eyes. Among muscle-workers, especially women, anæmia, malaria, syphilis and rheumatic influences require attention.

For the rapid relief of the headache itself, ammonium muriate ʒ ss to ʒ i, in wafers, is one of the best agents. The headache of neurasthenia is often cured by grains v of menthol in hot water, or by menthol grains v to x with antifebrin grains v to x. Phenacetin, also, is a good remedy. Antipyrin is often most valuable when given in small, frequent doses. The effervescent bromide or caffein mixtures contain too little of these drugs to be of much service.

Locally, aconitia in sprays or lotion; menthol, in twenty per cent. solution, on sheet lint, bound to the head; cyanide of potash applied in solution after Trusseau's method; and Rithet's tobacco and quinine snuff, are of value.

In persistent cases of headache of obscure origin, iodide of potassium may be used, or the strong galvanic current or static electricity may be tried. Such headaches may really be the result of diffuse neuritis, and will then call for treatment suitable to the underlying disease.—*Maryland Medical Journal.*

DIPHTHERITIC PARALYSIS.—The general impression about the prognosis of diphtheritic paralysis used to be that it was not very unfavorable. But the labors of some of the medical staff of the Great Ormond Street Hospital go to show otherwise. In children the affection is by no means one on which the physician can look with a satisfied gaze. The paralysis brings in its train a fatal possibility, chiefly from three directions: heart, lungs, and larynx—the organs whose innervation is largely by the vagus and phrenic nerves, the motor fibres of which are derived from nerve cells in the anterior horns of the spinal cord or their equivalents in the floor of the fourth ventricle. Dr. Harry Swift's pamphlet will serve to extend the knowledge of the prognosis of diphtheritic palsy on the continent of Australia. The work is constructed in excellent form, and contains many observations made by the author, whilst one of the resident medical officers at the Great Ormond Street Hospital. The mode of disappearance of the knee-jerk, as described by Dr. Swift, differs from that observed by Dr. Angel Money, who made out an increased excitability of this phenomenon prior to its final extinction. Dr. Herringham also discovered a similar excessive irritability of the deep reflexes during the period of restoration of the knee-jerk. The long absence of the knee-jerk in cases of post-diphtheritic debility unattended by actual paralysis is a fact on which Bernhard first laid proper stress. The knee-jerk is one of the most delicate indicators of the state of the nervous system, and some small muscles come, perhaps, next to it in sensitiveness—*e. g.*, the neuro-muscular apparatus of the ciliary muscle, the pupil, and the ocular muscles. Cases of complete ophthalmoplegia have been recorded as the outcome of diphtheria.—*Lancet.*

CLINICAL ASPECTS OF VOMITING.—After reviewing the act of vomiting, Dr. John H. Musser, of Philadelphia, divided it into direct and reflex. Changes in the organs of sense, etc., will also cause vomiting. The duration, time of day, and character of vomit should all be considered in looking for the cause. In naso-pharyngeal catarrh, and in chronic uterine diseases, morning vomiting is not infrequent. Sudden and painless vomiting in the aged is often one of the first symptoms of cerebral hemorrhage. There is no exhaustion in this kind of vomiting. If collapse occur, the vomiting may be uræmic. Prognosis is always grave in these conditions. In all conditions of vomiting the cause should be looked for.

Translations.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

ASTHMA IN CHILDREN; ABSTRACT OF CLINICAL LECTURE BY PROF. GRANCHER.

THE following case, a rather rare one, relates to a case of asthma occurring in a child somewhat obese itself, and born of asthmatic parents. The paroxysms of dyspnœa came on in the evening at the period when the child went to bed, and lasted about a quarter of an hour. After this first period it is seized with cough and expectoration, and then goes to sleep quickly. These phenomena occur almost every evening, interrupted, however, at times by an interval of calm of three or four days' duration. The disease first manifested itself about four years ago, and has continued since of this mild but persistent type.

Despite this abnormal aspect, it is nevertheless certain that it is a case of hereditary asthma that we are confronted by here, and which has been considerably ameliorated by the iodide of potassium.

Asthma in children is not infrequent; it is most commonly met with about the age of two years, but it may also be observed before this period, though the facts reported as to this period of life must be taken with considerable reserve.

In one patient the diagnosis is rendered more difficult by the slight intensity of the symptoms, and, on the hand, in other cases it is the very intensity of the manifestations that may be the cause of error. M. Grancher has thus observed a little patient who, after a severe attack of whooping cough, was afflicted with very intense paroxysms of asthma. The first of these attacks occurred during a voyage, and the physician who was called to attend the case, made a diagnosis of croup of great gravity, and but little and the child would have been tracheotomized. Since this epoch, the attacks have recurred in a rather particular form The crisis presents three distinct periods. In the first, the infant coughs and expectorates more than usual for three to five days; then comes the true paroxysm, which repeats itself for three or four successive nights; this attack comes on at about midnight, and lasts for one or two hours; the phenomena then diminish progressively for two or three days, then the child returns to the normal state for a month; only a slight bronchitis and emphysema remaining over.

This state has been much improved by the administration of iodide of potassium and a stay at Mount Dore.

There has been wrongly described under the name of asthma a peculiar type of dyspnœa, which should be considered as being rather of gastro-intestinal origin. Dr. Henoch, for example, cites the cases of infants of ten months to one year, who are suddenly seized with dyspnœa, with small pulse, feeble heart, cyanosis; accidents which might last from twelve hours to eight days, constituting thus a rather peculiar symptomatic tableau. However, in these cases so grave, all these phenomena may disappear completely after a purgative, after an emetic or after lavage of the stomach.

These facts, which it is very interesting to know, do not merit absolutely the name of gastric asthma, which has been applied to them; it is a special dyspnœa which has nothing in common with asthma, except the suddenness of the attack; they are cases certainly much more comparable to the cases of gastric dyspnœa described by M. Potain. Prof. Grancher cited, apropos here, a case which resembles these cases of respiratory trouble produced by so peculiar a cause; a patient suffering from chronic bronchitis is ordered to take creosote; the taking of the drug is followed by a spasm of singular form: as soon as the patient took any aliment she was seized with suffocations, with rapidity of pulse and veritable cyanosis, a condition which lasted for an hour or two. M. Potain, who was called in consultation, thought that the accidents were due to a gastric irritation produced by the creosote, and in fact the patient was cured by the use of ape's milk, which at first could be given only in teaspoonful doses, and then was progressively augmented in quantity.

The cases of this kind are therefore very distinct from true asthma, and they should not be brought together except for consideration as to differential diagnosis.

The asthma is produced by different causes, which must at first be sought for in the respiratory tract; the most frequently found cause is either a bronchitis or an emphysema; but especially in young infants we must not forget to search for a bronchial adenopathy, which is so frequent in them. We must also study the conditions of the larynx, attention to which may be directed by changes in the voice. Certain asthmas are, in fact, in direct rapport with lesions of this organ; we must not neglect to examine the nose and pharynx; we well know that in certain persons presenting altogether a normal appearance, we may find polypi, hypertrophies of the mucous membrane, deviations of the septum, and all these lesions may be the direct cause of the asthma. Finally, cases have been cited where ablution of the enlarged tonsils has sufficed for the suppression of the asthmatic paroxysms.

Before all the examination should be very thorough if we want to be assured that we have allowed no particular cause to escape our observation; furthermore we must think of malarial influences. Moncorvo has cited cases of cure with sulphate of quinine, and Jules Simon says that he also has observed cases of this genre. We must therefore investigate the condition of the spleen in these children, and learn their antecedents.

It is remarkable that the treatment with iodide of potass., in the dose of about one gramme per day, should be able to bring about not alone a suppression of the paroxysms, but also a modification of the bronchitis. However, the remedy must be continued for a long time, with intervals of suspension for eight days per month, having care to resume the medication before the presumed period of the crisis.

As to the paroxysm itself, independent of the means usually employed to combat it, we may also resort to antipyrine. M. Grancher has seen a patient who suppressed his paroxysms by the ingestion of two grammes of this substance; in this one the iodide of potass. was altogether ineffective.—*Jour. de Med. and Ch.*

TREATMENT OF SCROFULOUS RHINITIS.

℞.	Zinc. Sulpho-phenat., .	0.30	gramme.
	Bismuth Salicylat., . .	4	grammes.
	Iodol, ...	3	"
	Zinc. Tannat., . . .	2	"
	Talc. pulv., ...	10	"
M.	Sig. Powder to snuff.		

ACUTE ASCITES IN CHILDREN; EXTRACT FROM A LECTURE BY PROF. RONDOT.

We find a certain number of recorded observations of ascites coming on suddenly in children, and coincident with febrile symptoms, with pain in the belly and even with vomiting, altogether presenting a striking tableau of acute frank peritonitis.

It is generally in consequence of a cold, the body perspiring freely, or of the ingestion of very cold drinks, that we note its apparition; and in young girls particularly, the brusk action of cold at the menstrual epoch may give rise to a rapid effusion of serum into the abdomen, which has been denominated by Cruveilhier as the *ascites of young girls.*

Frequently it co-exists with some other edematous manifestations, attracting less attention, and denoting a dyscrasic state of which the dropsies of scarlatina and those following refrigeration of the body are a sufficiently frequent consequence, as it can also be observed in the course of malarial intoxication.

These facts should not be considered as relating to an essential ascites, for ascites is never more than a result, and depends altogether upon a cause, dynamic or material, as Bernier has said in his article "Ascites," in the Diction. Encyclopedique.

It is very probable that a minute and continued exploration of the patients would permit us to refer several of these cases to transitory modifications of the portal system of the liver, translating itself by the initial lesions of venous cirrhosis. Some others may appertain to slight forms of Bright's disease, as in the case of Rillied and Bartley, where a rapid cure after the employment of heat and diuretics coincided with the appearance of perspiration and abundant urine, diarrhœa and sero-mucous expectoration.

Finally in the warm countries, and in Bordeaux especially, acute febrile ascites may supervene as a manifestation of malarial poisoning, and disappear with the fever after the administration of quinine. M. Rondot has a remarkable observation of this character, and West insists upon the paludal origin of certain ascites, preceded by remittent and intermittent phenomena, indicating that they generally yield to the preparation of quinine.

We must remember that the same ensemble may be dependent upon a tuberculosis of the peritoneum, and that the ascites in such cases is comparable to certain forms of acute pleurisy, which supervene under the influence of bacilli.

As to the prognosis of these various forms, it can be said, that the ascites in children progresses to recovery; this is the principal idea deducted from all the known facts, and which Lendet has more especially brought to light. Whether we have to deal with primary or secondary effusions, we may hope for their disappearance under the influence of rest, of proper diet and an appropriate medication according to the probabilities which may lead us to presume the existence of lesions of visceral or of dyscrasic origin.

Calomel in doses of 0.10 ctgrms. per day, in two powders, is an excellent remedy in most cases, to complete the treatment of ascites in general, and to favor the diminution of the effusion. M. Rondot advises electrization, which addresses itself to the contractility of the abdominal muscles, which are frequently overtaken by an inertia in consequence of the effusions of infantile ascites, and not unfrequently by an atrophy analogous to that observed in pleural collections; an atrophy which should favor the reproduction of the effusion, and which we must combat with the sole efficacious agent in our possession, the application of faradic currents.—*Ibid.*

PILLS TO DISINFECT THE INTESTINES.

(Spoeth) ℞. Creatine, . 12 grammes.
Alcohol dilute. .
Pulv. Gum Tragacanth, āā 2 grammes.
Liquorice Juice.
Powdered Liquorice, āā 24 grammes.

M. Make 200. Take two pills two to three times a day, while the putrid process continues.

CREOSOTE IN PHTHISIS.

Banchard employs the following formula:

I. Creosote, . . 10 grammes.
Powder of dried .
Almond Soap, . 25 grammes.

M. Make 100 pills, eight to ten per day, one every two hours. If larger doses are desired, the following formula can be employed:

II. Creosote, . . 50 grammes.
Ol. Jec. Aselli., q. s. for 1 litre.

Pour slowly, and stirring the oil into the creosote. Each desert-spoonful will hold about 0.75 grammes of creosote, and of which one to two may be given morning and evening. The cod-liver oil may be replaced by some other oil, as oil of beechwood.—*Journal de Medic de P.*, 24, 1889.

Book Notices

SAUNDERS' QUESTION-COMPENDS No. 1.—Essentials of Physiology Arranged in the Form of Questions and Answers. Prepared Especially for Students of Medicine. By H. A. Hare, B. Sc., M.D. (Univ. of Pa.), Demonstrator of Therapeutics and Instructor in Physical Diagnosis in the Medical Department, and Instructor in Physiology in the Biological Department of the University of Pennsylvania; Physician to St. Agnes' Hospital. Second Edition, Thoroughly Revised and Enlarged. 12mo. Pp. 193. Cloth. Philadelphia: W. B. Saunders, 913 Walnut Street. Cincinnati: Alfred Warren. Price, $1.00.

We consider Saunders' Question-Compends as most valuable works for students of medicine. We think that every medical student should possess himself of the whole series, ten in number. Each work is arranged in the form of questions and answers. As stated in the advertisement, the usefulness of arranging the subjects in this form will be apparent, since the student in reading the standard works, often is at a loss to discover the important points, and is equally puzzled when he attempts to formulate ideas as to the manner in which the questions could be put in the examination room.

The manual on our table, of course, is not intended to supplant any of the larger works upon physiology, but to contain the essence of those physiological facts with which a student is expected to be familiar. Therefore, though small in size, all essential facts are mentioned and are defined in brief, explicit terms. We will give an example, and in doing so we do not think our space will be taken up unprofitably. For instance:

"*What do you mean by the reflexion of nerve force, or reflex action?*"

"Reflex action is due to the fact that an impulse traveling from the periphery to the body along the sensory nerve reaches the same point at which a sensory or receptive cell and a motor or expulsive cell exist side by side. Under these circumstances the sensory cell transfers an impulse to the motor cell, by conduction, which, in turn, starts an impulse down also its tributary motor nerve, with the result of contraction in the muscle which it supplies."

"*Give an example of this.*"

"If the foot of a frog be pricked, the leg which is pricked, and to a certain extent the other leg, are immediately jerked away. That this jerking away of the leg is not due to the fact that the brain desires to remove the leg from the irritation, is proved by the fact that if the spinal cord be cut, thereby preventing any impulses from reaching the brain, reflex action is as marked as if the cord was intact."

We learn from the catechism upon the Nervous System that the velocity of nerve force is about at the rate of thirty metres per second, or the speed of a fast express train, or about twice as fast as the fastest horse can gallop.

This number of the Question-Compends has met with great favor, for it has been but little over a year since the first edition was issued, and now a second is called for. The author has used every effort in his power to improve each portion of this second edition.

THE PHYSICIAN'S LEISURE LIBRARY.—Syphilis of the Nervous System. By H. C. Wood, M.D., LL.D. 16mo. Pp. 132. Paper. Detroit: George L. Davis.

Mr. Davis, of Detroit, the publisher of these cheap medical works, entitled "The Physician's Leisure Library," still continues their publication, issuing one on an average of each month. We have noticed quite a number of them, and have shown to our readers that they are both cheap and valuable. Not a few of them are from the pens of the most distinguished medical writers. We regret that it is true that very many medical men seldom make any additions to their libraries. Not a few give as a reason that they are too poor, for that medical books are expensive. But the physician that is too poor to expend twenty-five cents each month for a volume of the "Physician's Leisure Library," should seek some other employment than the practice of medicine. He owes it to the community to do so; for the physician who does not read enough of new works to keep himself fairly posted in the progress of medicine, so that his patients can have the benefit of new and valuable methods of treatment that are being discovered from time to time, is criminal. He is trifling with people's lives that are entrusted to his care.

But we wish to draw the attention of readers to the little work we have on our table. Syphilis is undoubtedly a vile disease, yet it is vastly prevalent throughout the civilized world in every rank of society. It is not limited to the low and vile classes, but it and its sequelæ are found in the mansions of the rich and the hovels of the poor. The learned judge on the bench, the eloquent lawyer, the pious preacher, the rich merchant, the chaste woman, all may be suspected of suffering from its effects when under treatment and obscure symptoms are present.

The present brochure largely sets forth the personal experience of Dr. H. C. Wood, the author, who is well known to the profession of this country. In the University Hospital and Dispensary there have been treated under his supervision five thousand cases of nervous disease, of which at least fifteen per cent., or seven hundred and fifty, have been in the persons of syphilitics. During seventeen years of service at the Philadelphia Hospital, there were under his care about two thousand patients suffering from various affections of the nervous system, of whom more than fifty per cent., or over one thousand, had suffered from syphilis. To these add those which he met in his private practice. It will thus be seen that his experience in the observation and treatment of nervous affections complicated with syphilis, has been very great indeed. Surely, under such circumstances, so accurate an observer and skillful physician as Dr. Wood is able to detail in a work like the present, no little valuable information. An examination of the work proves it to be so. Dr. W. discusses the etiology of syphilis in its affection of the nervous system; its action upon the brain and its membranes; its action upon the spinal cord; and its action upon the peripheral nerves.

FOURTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF MAINE. For the Fiscal Year Ending December 31, 1888. 8vo. Pp. 336. Paper. Augusta, Maine.

The State Annual Report of the Board of Health of Maine is a very interesting one indeed—containing, as it does, much valuable matter. Besides containing statistics, many of which are of more interest to physicians residing in the State of Maine than elsewhere, there are a number of reports upon diseases that would interest intelligent physicians everywhere. There are valuable and exhaustive reports in the work upon Phthisis Pulmonalis, Distribution of Tubercle Bacilli, Death Rate Among Nurses, Diphtheria, Jaundice, Pneumonia, Typhoid Fever, etc.

Under the title "*Is Pneumonia an Infectious Disease?*" there are presented the reports of a number of physicians of epidemics of pneumonia which seemed to have had their origin in infection. Dr. Twichell, of Freeport, reported as follows: "In the winter of 1886-87, I attended about fifty cases of pneumonia. I can attribute the unusual prevalence of the disease to no cause excepting great and severe change of temperature, or to some unusual condition of the atmosphere. Two ladies were attacked about the same time who lived close together. A neighbor who came to nurse one of these patients for three days, went home and at once had pleuro-pneumonia. Her place was taken by two sisters of the first patient, one from Brunswick and one from Yarmouth. In a few days after their arrival both these sisters were attacked with lobar pneumonia within twelve hours of each other. This suggests infection."

Another report is from Dr. Henry D. Palmer, of Phillips: "In April, 1887, I attended a family in Sandy River Plantation. The family consisted of three old people between seventy and eighty years of age, and a young man of about thirty years. One of the old people had died about a week before my first visit, but from description of symptoms had undoubtedly had pneumonia. The other two old people were both taken sick the day of the funeral. One had a simple pneumonia and the other had typhoid symptoms. Of these one died and the other lived. In about two weeks after this, the son was attacked with the same disease, but recovered. Also a man who came there to assist the family was taken sick in about a week and died. The house where this sickness occurred was situated on the shore of one of a chain of ponds, which at this time of the year are very full from the snow melting from the mountains. This may have been the cause, or it may have been from infection. I also attended a person in a family the present winter in which five persons had pneumonia in succession, with two deaths. In this instance I could discover nothing in the sanitary condition of the place which would explain."

There is a short paper upon *Cerebro-Spinal Meningitis*. As late as 1884, it is stated that Stille said—"No one of authority has claimed that this disease can be propagated by contagion," yet he expresses it as his belief that "there is a material morbific principle which inheres in certain localities, so that those who occupy them successively are likely to suffer from this disease, and that also this principle may be carried from place to place so as to render certain houses (barracks) infectious, seems to be demonstrated by the history of the disease in the French army."

The author of the paper then announces that the most of bacteriological work which has been done in connection with Cerebro-Spinal Meningitis indicates that the pathogenic agent is the same as in pneumonia.

The reports upon the various endemic diseases, which are considered, make this State Board of Health Report quite a valuable work.

INEBRIETY: ITS ETIOLOGY, PATHOLOGY, TREATMENT AND JURISPRUDENCE. By Norman Kerr, M.D., F. L. S., Fellow of the Medical Society of London; President, Society for the Study of Inebriety; Chairman, British Association Inebriates' Legislation Committee; Consulting Physician, Dalrymple Home for the Treatment of Inebriety, etc. Second Edition, 12mo. Pp. 471. Cloth. London, Eng.: H. K. Lewis, 136 Gower Street, W. C.

This work we have just received from the London publisher. It is the most exhaustive work upon the subject it treats with which we have met.

The volume has been written in the hope that it may aid, through the medium of the attending practitioner, in the enlightenment of the patient, his sorely-tried relatives and the community, in the great truth that inebriety is a disease, as curable as most other diseases, calling for medical, mental and moral treatment. Though the work is but little technical, and can, therefore, be read with satisfaction by intelligent laymen, yet it has been prepared exclusively for the use of members of the medical profession, and not for popular reading. The author, therefore, expresses a hope that it may be found serviceable by his professional colleagues.

It is stated that phthisis pulmonalis is so wide-spread that one-seventh of the mortality is produced by it. But neither phthisis pulmonalis nor any other disease is so wide-spread as inebriety, especially in the United States and in England. In the whole circle of even an extensive acquaintance it may happen that no member of a family has been known to have suffered from any of the leading diseases which prevail—that no one has been laid low by consumption or cancer. But there are very few families which have not at least one relative who has been the subject of inebriety. In too many instances this family failing has unhappily not been confined to one member of the domestic circle.

The author very correctly says: "Till these last few years drunkenness has generally been regarded but as an act of folly, a sin, a vice, or a crime. The finger of scorn has been pointed at the sot as an object of ridicule and contempt. The drunkard has been stigmatized as a good-for-nothing scapegrace who loves excess for its own sake, who lives but to gratify his vitiated tastes, who from his inherent depravity knowingly and unblushingly prefers vice to virtue, intoxication to sobriety. The theologian denounces the intemperate one as willingly guilty of heinous sin. The judge punishes the riotous drunkard as a criminal offender. Whatever his inherited tendencies, whatever his original weakness of will, whatever his inborn deficiency of moral control, whatever his natural susceptibility to the narcotic influence of intoxicating agents, contumely and reproach, pains and penalties have been the only means which has generally been employed in the treatment of the subjects of alcoholic indulgence."

It is remarkable to us that for so long a time the drunkard has been regarded only as a vicious man, a criminal, who should be punished for his excesses by imprisonment in a jail or work-house, to his own disgrace and the disgrace of his family and friends. And these views have been held in the face of the fact that the warmest hearts, the kindest souls, the most unselfish spirits, the most brilliant intellects have been made drunkards through the "syren influence of the demon alcohol," which can change the nature and undermine the intellect of the best man or woman that ever lived. We presume that there is not a physician who has not been appealed to again and again by a wife or mother or sister or friend, to know if there is not some medicine, some mode of medical treatment, by which the chains of intemperance, which bind the drunkard, may not be broken so that he may not be dragged down to death.

The work before us contains twenty-three chapters. The first chapter is devoted to demonstrating that inebriety is a disease. Other chapters are devoted to the consideration of the Etiology of Inebriety, the Pathology, and the Treatment.

The author considers among the exciting causes of inebriety a peculiar diathesis. Exciting causes, he states, such as sudden joy or sorrow, would be unable to provoke to inebriety in action unless there were something within the organism ready to be acted upon, as it were an inflammable entity easily fanned into a flame by a spark from without or from within. Many persons who drink, but never become intoxicated, are tried by as many vicissitudes, experience as many calamities, suffer as many bereavements; undergo as great hardships, as those who drink and get drunk. Why is this? Credit may be attributed to the fortifying influences of religion, of social and other environments; but after ample allowance for the operation of all such influences, there are large numbers who are indebted for their inability to keep from indulgence in the hour of extremity, to some inherent physical defect which renders them prone to surrender to inebriety, and this physical defect constitutes a *diathesis* which is marked by a deficient tonicity of the cerebral and central nervous system, with an accompanying defective inhibition or want of self-control. If the brain and nerve-cells are healthy, so are their functions. If the brain and nerve substance is imperfectly nourished, the will-power is heavily handicapped.

This defective controlling power may be inherited or may be acquired. Self-indulgent parents, though never themselves intemperate, but never used to self-restraint in indulging themselves, may originate pre-existing inborn constitutional deficient power of inhibition, by begetting progency all of whom may be more or less wanting in that normal amount of self-control with which fairly sound human beings ought to be endowed. Lack of sufficient brain-will and restraining power may be handed down by parents who have never tasted an alcoholic or other inebriant. This inheritance may have taken its origin simply in infraction of the ordinary laws of health, the morbid state having been gradually set up by irregular and improper feeding, mental or physical overwork, the neurasthenic sequelæ of various lowering ailments, etc.

But we have not space to follow further Dr. Kerr in considering the pathology of inebriety. Though we do not agree with him in many statements he makes, yet it must be confessed that much that he says is true. He has given the pathology of drunkenness very profound consideration, and has established a series of pathological principles which can not well be gainsayed, demonstrating scientifically the fact that confirmed drunkenness is the result of a morbid condition of the brain and nervous centers—a disease—which is as amenable to treatment as are other diseases. Vicious men often purposely get drunk to increase their vicious enjoyments and to subserve vicious ends, but such cases are recognizable, and we do not suppose that Dr. Kerr would include them among the classes whose inebriety resulted from pathological causes.

The chapters of the work upon the treatment of inebriety contain much that is interesting and valuable. The author shows the absurdity of resting any hopes for the cure of inebriety upon any single remedy which will give the drunkard a distaste for intoxicants and save him without any effort of his will. The disease must be treated like all other diseases according to the indications that are presented in each case—the patient desiring to be cured and willing to subject himself to the treatment proposed.

Dr. Kerr asserts that there need be no fear of collapse or an attack of delirium tremens as the result of the immediate withdrawal of all alcoholic stimulants. He urges, however, that the patient should be given an abundance of stimulating and easily digestible food. If the stomach and liver are deranged, bowels constipated, or diarrhea exists, appropriate remedies should be exhibited. The main indication is to keep up the strength. In the way of medicines, carb. ammon., tr. hyoscyam., bromid., potass., nux vom., strychnia, quinine, valer., zinc, hydrat. chlor., etc., will be indicated. As much as possible, narcotics should be done without. We cordially recommend the work to physicians as one worthy of study.

Editorial.

MARRIAGE OF A DISTINGUISHED DENTIST.—Dr. J. Taft, a distinguished dental surgeon of Cincinnati, having become weary of living alone, like a sensible gentleman took to himself very recently a wife, marrying Miss Mary Sabine, an intelligent, cultivated lady.

Dr. Taft holds a high position in the dental profession of this country. He is the author of a number of standard works on dental surgery; he has been editor for many years of the *Dental Journal*, the leading journal of dentistry of the West; and for a quarter of a century, or longer, he has been a teacher of dentistry. For several years he has filled a chair in the Dental Department of Michigan University, at Ann Arbor, Mich. Previous to his connection with Michigan University, for many years he was a member of the faculty of the Cincinnati Dental College.

The Doctor and his wife, at the time of our writing, are spending their honeymoon in the East. His many friends congratulate him in taking a partner to share his prosperity and the esteem which he has acquired, and sincerely wish that he and his wife may enjoy together many years of happiness.

BIOGRAPHY OF EPHRAIM McDOWELL.—We were recently called upon by Mrs. Mary Young Ridenbaugh, of St. Louis, a granddaughter of the distinguished surgeon, and father of ovariotomy, Ephraim McDowell, who informed us that, at the earnest solicitation of many medical gentlemen and admirers of her grandparent, she had prepared a life of him at great expense of time and labor, and would place the manuscript in the hands of the publisher for immediate publication so soon as a sufficient number of subscribers were secured to meet the cost. Although Mrs. Ridenbaugh has only just started out to bring the work to the attention of physicians, yet she has met with most flattering success. Previous to visiting Cincinnati she called upon the medical gentlemen of Chicago, and every one of those to whose attention she brought the proposed biography subscribed for a copy.

Mrs. Ridenbaugh is an accomplished, educated lady, and possesses fully the qualifications essential for preparing a biography of her illustrious progenitor. She has diligently collected all the facts pertaining to his life as a physician and citizen that would be interesting to physicians and his admirers generally; and, in detailing these, she will exhibit the status of the profession, and the manners and customs, too, necessarily, of society, when Dr. McDowell was in his zenith.

Though famous as the father of ovariotomy, having been the first surgeon in the world to perform that operation, Dr. M., in addition, during his time, was the most eminent surgeon in Kentucky and the Southwest.

There will be published in the work considerable correspondence of the highest interest to the profession. Medical men not only of this country, but of England, have furnished Mrs. R. letters which were not known before to be in existence. Besides a plate of an accurate likeness of Dr. McDowell, there will also appear in the work excellent pictures of other distinguished physicians and surgeons.

Dr. Ephraim McDowell was born in Virginia on November 11th, 1771, one hundred and eighteen years ago. His father, Samuel McDowell, was, for many years, a member of the Legislature of Virginia. The Doctor was the ninth of twelve children. It will be seen that, in those days, when young women got married, they expected to become mothers of large families. They were not ashamed of it, but rather were proud of it.

When scarcely two years of age Ephraim McDowell was brought to Kentucky. It is stated that he attended a classical seminary first at Georgetown and then at Bardstown. Soon after leaving school he began the study of medicine with Dr. Humphreys, of Staunton, Va., who was a graduate of the University of Edinburgh. After studying medicine two or three years with his preceptor, he went to Scotland and entered the medical classes of the University of Edinburgh He attended the lectures for the sessions of 1793 and 1794. This institution, says Dr. Gross, Sr., was in the zenith of its renown, attracting pupils from the whole civilized world. Three famous men lectured in it, Gregory, Black and Munro. We have in our library the Practice of Gregory, which, in its day, was the text-book upon practice in every medical school in this country and Great Britain, and probably of many on the Continent.

Young McDowell did not like the lectures upon surgery at the University, and so he joined the private class of Mr. John Bell, whose name is familiar to this day. He was probably the most profound teacher and eloquent lecturer of his time. It will thus be seen, though the young American may have been regarded as a backwoodsman, and, in fact, was one, yet he "drank in the waters of science as they gushed forth from the eloquent lips," while a student, of the most famous medical teachers of the age. It can not be said of him, therefore, that, possessing the boldness and rashness of ignorance, he stumbled upon ovariotomy because he dared do what no intelligent surgeon, enlightened by the knowledge of that time, dared to do. Dr. Gross says that Mr. Bell is said to have dwelt with peculiar force and pathos upon the organic diseases of the ovaries, speaking of their hopeless character, when left to themselves, and of the possibility, nay practicability, of removing them by operation. He, however, had never ventured to remove them. The instruction he gave no doubt made a powerful impression upon his student, which he did not lose after he left Edinburgh.

After a residence abroad for two years, during which he stored his mind with valuable knowledge, he returned to Kentucky in 1795, and settled at Danville, the scene of his future labors. The fame of his foreign tour preceded him, and he was soon overwhelmed with business. It was known that he had been a student of John Bell, the most celebrated surgeon of the age, and that he had devoted himself, with special assiduity, to the study of anatomy and surgery. The consequence was that patients flocked to him, not from his neighborhood only, but from all parts of the Southwest. All the important operations that were required for hundreds of miles around were performed, for a number of years, by him. Dr. Dudley, who afterward became so celebrated for his surgical exploits, had not yet begun his professional studies, and none of the larger towns of Kentucky had any surgeons of distinction, or even ordinary capacity.

We will now mention the first case of ovariotomy the world had ever known to be performed, performed by Ephraim McDowell, and which has saved the lives of thousands of women, and which continues to save the lives of hundreds every year, who, before Dr. Ephraim McDowell demonstrated could be saved by ovariotomy, were permitted to die—it being believed that there was no help for them.

In 1809, Dr. McDowell was consulted by a Mrs. Crawford, the subject of a large ovarian tumor. He had heard Bell lecture upon the ovaries in Scotland, and he had thoroughly studied the relations of the pelvic viscera, and felt fully persuaded, according to the statement of Dr. Gross, of the practicability of removing enlarged ovaries by a large incision through the walls of the abdomen. He knew very well that the Cæsarian Section had been repeatedly performed with success, and he could see no reason why ovariotomy should be attended with more difficulty to the surgeon, or greater hazard to the patient.

After a most thorough and critical examination of Mrs. Crawford's case, Dr. McDowell informed her that the only chance for her relief was excision of the diseased mass. He explained to her, with great clearness and fidelity, the nature and hazard of the operation; he told her that he had never performed it, but that he was ready, if she was willing, to undertake it, and to risk his reputation upon the issue, adding that it was an experiment, but an experiment well worthy of the trial. Mrs. Crawford was a woman of great courage and strength of mind. She listened to the surgeon with great patience and coolness, and at the close of the interview promptly assured him that she was not only willing, but ready to submit to his decision; asserting that any mode of death, suicide excepted, was preferable to the ceaseless agony which she was enduring, and that she would hazard anything that held out even the most remote prospect of relief. The result has long been before the profession. Mrs. Crawford submitted to the operation, and had the glorious honor of being the subject on whom it was demonstrated that a malady that had in all times previously been considered necessarily fatal could be cured; and that the subjects of it need not be left to die.

Mrs. Crawford recovered in due time, and returned to her home. She lived until after the completion of her seventy-eighth year, dying in the year 1841—surviving for thirty-two years after the performance of the operation of ovariotomy upon her. Dr. McDowell performed the operation successfully on two other women—each one recovering—before he furnished a report for publication.

Dr. Gross, to whom we have frequently referred, says that Dr. McDowell's cases of ovariotomy were treated at first with contempt abroad, and attempts were made to discredit them at home. His nephew, Dr. Wm. A. McDowell, urged him, and finally got him, to consent to draw up a paper giving an outline of his cases to send to Dr. Bell, of Edinburgh. Dr. Bell, however, never received it, as he was traveling in Italy, from whence he never returned. The paper subsequently fell into the hands of Mr. Lizars, who published it seven years afterward in the *Edinburgh Medical and Surgical Journal.* Another copy of these cases was sent in 1816 to the celebrated Dr. Physick, of Philadelphia; but the "Father of American Surgery," says Dr. Gross, "never took any notice of it, either to Dr. McDowell, his pupils, or any one else. He had no time to bestow upon the subject, or the subject was unworthy of his attention. He might have thought the author of the paper a backwoods impostor, or a man speaking for buncombe."

Dr. McDowell kept no notes of his cases; and his first publication of his first three successful ovariotomies was brought about with the greatest difficulty by his friends. The report of them appeared in the *Eclectic Repertory*. For his dates he had to consult his ledger, and for the facts he had to trust to his memory. The publication in the *Eclectic Repertory* elicited hardly any notice. Indeed, so far as could be ascertained, it encountered general incredulity, if not positive ridicule. The paper of Mr. Lizars, in the *Edinburgh Medical and Surgical Journal*, says Gross, met with a better fate; for it at once attracted marked attention, and produced strong excitement throughout the medical circles of Europe; a circumstance which reacted with electrical force and rapidity upon the United States. The question of the reliability of the reported cases was at once thoroughly investigated and established. Ovariotomy is now, as every one knows, one of the established resources of surgery.

As Dr. McDowell unfortunately kept no notes or memoranda of any of his cases, it is not positively known, even to his most intimate friends, how many times he performed the operation of ovariotomy. Dr. W. A. McDowell, who was a member of his family for seven years, stated that up to the time he left him he had had seven cases, all of whom recovered except one. These, however, were added to subsequently, so the nephew informed Dr. Gross, making in all thirteen cases to his knowledge. Exclusive of these were three or four operations performed by Dr. A. G. Smith, a partner of Dr. McDowell after his nephew removed to Virginia.

But Dr. McDowell's claims as an eminent surgeon do not rest upon his ovariotomy operations. He ranked deservedly high, according to the testimony of Dr. Gross, as a lithotomist. For a time he was almost the only surgeon in Kentucky who performed this operation. In the latter period of his life he was eclipsed in this branch of surgery by his neighbor, Dr. Dudley, of Lexington, who, after the establishment of the Transylvania Medical School, for many years almost monopolized the stone cases in Kentucky and the adjacent States. It is not known how often he performed this operation; but there is positive information, that up to 1828, two years prior to his decease, he had operated thirty-two times without the loss of a patient. But so careless was he in preserving any memoranda of what he did professionally, it is not improbable he performed the operation many more times. His success was rare and highly creditable.

One of his most interesting cases, in consequence of the exalted position he afterward attained, was that of James K. Polk, President of the United States. This gentleman had suffered from symptoms of vesical calculus from an early period, and when in his seventeenth year, in 1812, he was induced to consult Dr. McDowell, at Danville, Ky. He carried the stone home with him, not in his bladder, but in his pocket, to show to his friends and neighbors. In a letter dated Maury County, West Tennessee, December 3d, 1812, he informed Dr. McDowell of the progress of his cure, and feelingly expressed his sense of gratitude for the services which he had received from him. It is stated that the letter, as a specimen of composition, is far below mediocrity; it is badly spelled, and written in the worst style. We forgot to inquire of Mrs. Ridenbaugh, when she called upon us and informed us that she had the manuscript in readiness for publishing the life of her distinguished grandfather, whether or not this letter of Mr. Polk would appear in the work. If it should, we presume the bad orthography and bad grammar will be corrected. Fourteen years afterwards, when Mr. Polk represented Tennessee in the Congress of the United States, he again addressed a letter of gratitude to his surgeon. This communication was written with great accuracy and even eloquence. Though it will lengthen this article more than we desire it should be, yet we will quote a portion of this letter, feeling justified in doing so on account of its showing young men how early obstacles may be vanquished by industry, and how perseverance enables men, from small beginnings, to attain to great ends.

"I have been enabled," says Mr. Polk, "to obtain an education, study the profession of law, and embark successfully in the practice; have married a wife and permanently settled in Tennessee; and now occupy the station in which the good wishes of fellow citizens have placed me. When I reflect, the contrast is great indeed, between the boy, th meagre boy, with pallid cheeks, oppressed and worn down with disease, when he first presented himself to your kind notice, in Danville, nearly fourteen years ago, and the man at this day in the full enjoyment of perfect health." And this perfect health which he was enjoying he owed to Dr. McDowell.

It is stated that Dr. McDowell paid much attention to hernia. He often operated successfully for the relief of strangulation, and performed many radical cures by means of the truss. President Polk, early in life, was permanently cured of a hernia by him.

Dr. Gross says that, as a surgeon, Dr. McDowell was exceedingly cautious, and never undertook an operation until his own mind and the patient's system were prepared to his entire satisfaction. His anatomical knowledge, courage and dexterity were sufficient to enable him to execute any operation that might have been required within the extensive circle of his practice. He was an accomplished anatomist. He made it a business to dissect more or less every winter, and took especial pains to aid his pupils in acquiring a knowledge of the human structure.

He was no writer. The only contributions he ever made to medical literature are his first five cases of ovariotomy, in the seventh and ninth volumes of the *Philadelphia Eclectic Repertory*. "It is a subject of deep regret," says Dr. Gross, "that he should have felt, throughout the whole of his life, such a deep repugnance to the publication of the results of his experience. Extensively engaged as he was for so long a period in the practice of medicine and surgery, he must have accumulated a vast amount of knowledge, most valuable to the profession and suffering humanity, and eminently conducive to the extension of his own fame. But such exercise was distasteful, and no remonstrance, on the part of his friends, could induce him to engage in it. Temporary notoriety and posthumous fame were subjects alike of indifference to him.

His library was quite extensive for the period in which he lived, consisting of all the standard medical works, many of which he had brought from Europe. On the practice of physic he always procured and read the most celebrated authorities. He was an ardent admirer of Sydenham and Cullen, and never could appreciate any advances worthy of note upon these celebrated writers. In his judgment, all other writers on the practice of medicine were mere bunglers and copyists in which nearly all intelligent professional men at that period concurred. During his time there were no developments by the microscope and other means of research, and consequently the additions to the knowledge of physiology and pathology were few and far between. In fact pathology had not been developed into a department of medicine. Nothing was known of the changes brought about in the minute or cellular structure of the tissues of organs by disease; and, consequently, it was difficult or almost impossible to demonstrate any error in the theories of such great minds as Cullen and Sydenham, and conservative men, therefore, like McDowell, regarded it as almost sacrilegious to contradict their views. On looking through the Practice of Medicine of Dr. Gregory, of Edinburgh University, which, we know, was the text-book upon Practice in the Medical College of Ohio from 1827 to 1830, and we do not know how much longer, we find him expressing great incredulity of Lænnec's profession of ability to use the stethoscope in differentiating the diseases of the organs of the chest. It will be thus seen that even the stethoscope was not known, much less generally employed, as an instrument of precision for making an accurate diagnosis until toward the close of Dr. McDowell's life.

His fees for surgical operations were regulated, as a general rule, by the ability of his patients. Occasionally they were large; in one instance, says Gross, "almost princely." His regular fee for an ovariotomy was $500. But in the summer of 1822, he was called to Tennessee to operate upon a Mrs. Overton who lived near the residence of Gen. Andrew Jackson. On the morning of his departure her husband handed him a check, which he presumed was for the stipulated sum which he had stated was his usual fee. On presenting it to the bank at Nashville, on which it was drawn, he discovered that it was for $1,500, instead of $500. Presuming that a mistake had been made, he immediately dispatched his servant to Mr. Overton, who replied that no mistake had been made—that Dr. McDowell's services more than counterbalanced the sum he had just paid him.

Dr. McDowell was nearly six feet in height. He had a florid complexion and very black eyes. He was inclined to corpulency. He was fond of music, and sang a variety of odes in Latin, English and Scotch. He was fond of songs of a comic and humorous character. He liked to play upon the violin, but is said to have been a rather poor performer. While in Scotland, during the summer vacations, accompanied by a couple of other Kentuckians, he rambled on foot all over Scotland, carrying his clothes and lunches in a wallet. In this way he learned the Scotch dialect to perfection, and was fond of singing songs in it.

He was a member of the Episcopal church, and gave the lot, it is stated, on which was erected the present Episcopal church edifice of Danville He died June 25, 1830, of an inflammatory fever, in the fifty-ninth year of his age.

We have given a great deal of space in presenting a brief outline of the life of this great man. It is astonishing how very few, even of medical men, know anything about Dr. McDowell; of the laity, scarcely any have heard of his name. Many physicians know that such a man once lived, and that he "discovered ovariotomy," or first proved its feasibility, but the majority of them, from the fact, we presume, that he lived and practiced medicine in a comparatively small town of Kentucky at an early day, have gotten the impression that he was only an ignorant, uncouth, uncultivated backwoods doctor, who, in consequence of his great ignorance and great daring, was induced to cut through the abdominal walls of some poor, ignorant woman who unfortunately had a large ovarian tumor, and remove it—thus accidentally, through the boldness begotten of ignorance, proved the feasibility of the operation. But it will seen, from the history of the man that we have been able to give our readers, that all such impressions are radically wrong. Dr. McDowell conceived the operation as the result of profound study of the anatomy and physiology of the abdominal organs—particularly those of the female. He was moved to this study in consequence of his great humanity and his great zeal for prosecuting the study of his profession. There was not an element of *daring* in him—he was one of the most cautious of surgeons, never venturing to operate in any case until he had profoundly studied it and felt that he fully understood it.

In the history of the world it seems to us there has never been a great man so little known as Dr. McDowell. But now as his granddaughter proposes to publish a life of him, we hope the stigma of ignorance, especially from the medical profession, will be removed.

The greatness of generals, of statesmen, of poets, of orators, of men of science, etc., is known and acknowledged, and monuments are erected to their memory. Poets and orators and historians proclaim their praises; but what general, or statesman, or man of science, has benefited the world like Dr. Ephraim McDowell? Thousands of mothers, wives, sisters and daughters have been relieved from excruciating suffering and saved from death by his discovery in surgery; and hundreds every year throughout the world continue to be added to the number of those who have been relieved and saved. Instead of the name of McDowell being known by only a few physicians, it seems to us that his praises should be on the lips of every one; and that statues of him should be erected in every land to his memory.

We feel sure our readers will not regret our giving so much space in detailing briefly a few facts of the life of so great a man, but rather will be glad that we have done so.

A PHYSICIAN'S JOURNAL AND REGISTER.—Dr. S. L. Kilmer, of South Bend, Ind., has recently issued a Pocket Day-Book and Journal, for keeping a record of the business of physicians. It is neat, concise, complete, bound in Russia, 7¼ inches long, 4 inches wide, ⅝ inch thick, and can easily be carried in the side pocket. Running accounts can be kept with four hundred individuals; and, besides, all unsettled accounts of preceding years can be preserved alphabetically and chronologically classified, so that the physician is at any and all times prepared to settle with debtors, as he has their accounts always with him, thus saving every year many times the cost of the book. Its use saves the physician much time, labor and book-keeper's salary, as the one entry he makes completes the whole work for Day-Book, Journal and Ledger, as its title indicates.

A proper portion of space is arranged for keeping accounts of services rendered insurance companies. There is also space for accounts with transients, or those with whom but little business is likely to be transacted. This is an excellent feature, and will be appreciated by physicians in large cities. It contains a cash book, obstetric memoranda, etc. It is, in fact, one of the most complete and perfect works of its kind extant. No physician should be without a copy. Sent prepaid to any address for $2.00 Address Dr. S. L. Kilmer, South Bend, Ind.

Dr. Parkes, Professor of Surgery in Rush Medical College, Chicago, has written a very flattering testimonial as regards the excellence and worth of the Pocket Ledger.

THE
CINCINNATI MEDICAL NEWS.

VOL. XXII. No. 262. Old Series. OCTOBER, 1889. VOL. XVIII. No. 10. New Series.

Original Contributions.

The Responsibilities and Duties of the Medical Profession Regarding Inebriety.

Address of President C. W. Earle, delivered at the Thirty-ninth Annual Meeting of the Illinois State Medical Society, May 21st, 1889.

AT such a time as this, and in the presence of a representative body of medical men and citizens of the fourth State in our Union, a subject of more than mere local importance should engage our attention. Such topics as "A Higher Medical Education," "The State Board of Health," and "The Care of the Insane," suggest themselves, and the entire evening could very profitably be consumed in presenting facts demonstrating why every charitable institution in Cook County, and possibly every other county in this State, should be divorced from politics and placed under the control of trustees or directors composed of medical, legal and business men. But, with the facts at my command—and in the main they are well known to the public—perhaps none is more important to the individual and to the community than the one which I have chosen; and without a doubt, if you or I are in any degree coming under the habit, or if we are not exercising our influence in the right direction in the practice of our profession, there is not a subject which we could discuss, of greater moment.

For more than eighteen years your speaker has occupied a position in a reformatory institution, and has watched with at least some degree of care, nearly if not quite ten thousand cases of alcoholic and opium inebriety. Among this number will be found represented every profession and occupation, the young and the aged, and people of nearly every nationality. I have noted with great anxiety and solicitude that a number of our profession, somewhat out of proportion to the other professions, are obliged, from time to time, to absent themselves from their homes and fields of practice, and find it convenient, while ostensibly attending a post-graduate course, or looking after some real estate interest of some distant relation, to visit our institution for relief.

My deductions from these cases and remarks to you at this time will not be from the standpoint of a prohibitionist, or that of a temperance lecturer who sees everything bad in whisky and nothing bad in every other form of intemperance, but from the standpoint of practical temperance, and with the hope that good may come to some who may possibly have their attention directed to a commencing habit.

That a large number of the people in almost every community use alcoholics to excess, and thus in many cases at least impoverish their families, and, in some instances at least, impose burdens on the State, no one will deny. And that our profession in every degree, either by practice or precept, exercises its influence in the right direction upon the subject, can not be claimed by its most ardent or zealous members.

Hardly a month passes without a physician coming under my care, and already one whose diploma I signed less than three years ago has been obliged to seek refuge from the opium habit. If one looks over the mortality list of physicians in our State, he will be surprised that several returns of death have been made from alcoholics, and not a few from the morphine and chloral habit. There is one other fact to which I shall call attention at another place in my paper, which I must outline or at least intimate at this time. It is the responsibility of our profession in prescribing without limit alcoholic and opium preparations. If I make the statement that two or three in each hundred in our profession use alcohol or opium to excess, and there are those who believe that an estimate of ten per cent. would not be an exaggeration, I must also say, and the assertion is not made without a great array of facts to sustain it, that a considerable number of the non-medical people who succumb to the seductive influence of alcohol and opium took their first dose from a physician. Frequently, aye, very frequently, the story comes to me, that Dr. A or B prescribed morphine to me, as a remedy for some painful disease; or, an alcoholic, for a debilitated and enfeebled condition; and, being entirely unaware of the seductive charms of either, I continued their use until I am now absolutely within their grasp. But it is not alone among the people that this result comes—our profession feels it.

I have here a list of thirty cases, all physicians, who have been treated for the opium habit, and I find the causes assigned for the use of the drug, and the direful result nearly always attained, are not particularly different from the causes and results given by non-professional people.

NO.	AGE.	CAUSE FOR TAKING OPIUM.	KIND AND METHOD.
1	36	None assigned.	No record.
2	28	Pain in head.	Hypodermically.
3	38	Insomnia.	Tr. opii.
4	35	To relieve headache.	Morphia, prescribed by a physician.
5	52	For cardialgia.	Morphia prescribed by a physician.
6	44	Rheumatic pains.	Morphia, by mouth.
7	37	For ship fever.	Morphia, prescribed by a physician.
8	29	For headache	Morphia, by mouth.
9	37	For pain in stomach.	Morphia, by mouth.
10	41	For diarrhœa	Morphia, by mouth.
11	70	For neuralgia.	Hypodermically.
12	27	Severe mental strain.	Hypodermically.
13	27	Rheumatic pains.	Hypodermically.
14	26	For a painful boil.	Hypodermically, by a physician.
15	35	Nervous debility.	Hypodermically.
16	41	For neuralgia.	Morphia, by mouth.
17	37	For want of rest.	Hypodermically.
18	40	Rheumatism.	Hypodermically.
19	33	For its exhilarant effect.	Hypodermically.
20	57	For gastralgia.	Hypodermically.
21	28	Rheumatism.	Hypodermically.
22	68	Rheumatism.	Hypodermically.
23	47	To assist in practice.	Hypodermically.
24	40	Rheumatism.	Morphia, by mouth.
25	39	For peritonitis.	Hypodermically.
26	32	Necrosis of tibia.	Hypodermically, by physician.
27	42	Neuralgia	Morphine, by mouth, by physician.
28	33	For bilious attack.	Hypodermically.
29	56	Gastritis.	Morphia, by mouth.
30	37	Rheumatism.	Hypodermically.

Among the people, and more particularly the young, the following reasons for commencing the use of liquor and opium use are usually given: Drinking associates their usual companions; sociability; the habit of treating; trouble of any kind; the liquor business; army and navy associations; drinking in the family; sickness; prescribed by a doctor.

To these medical men add: Mental and physical exhaustion incident to long rides; exhaustion at or following severe medical cases, or following obstetric and surgical operations, and to aid in withstanding the vicissitudes of inclement weather.

The young physician is tempted to take alcoholics, if he is not studious, during the years he is battling for a practice. Sometimes with the hope that it will bring him patients, and at other times because he is discouraged.

Whether a professional man or non-professional, if one has formed the habit from any of the causes I have mentioned in his youth, trouble of any and all kinds causes him again to seek relief either in drink or opium. And at this time, in my judgment, he seeks relief knowing full well what the drug will do to him, and, too, he does it voluntarily.

This brings me at once to discuss the question: Why do men use alcohol and opium, and particularly physicians who know without any kind of doubt that they are cultivating a habit which in the end is sure to bring about a train of disasters a thousandfold more distressing than the paltry pain which they profess to relieve.

Is this habit of indulging in alcohol or opium a disease in the sense that we use the term. In other words, is a man responsible for being a drunkard or an opium habitue. To me there is but one answer to these questions, and that is at variance with the opinions freely expressed by the so-called specialists in inebriety. To me in ninety-eight cases out of every one hundred there is no semblance of disease—it is not *necessary* to drink or take opium to excess—as a practice it is entirely avoidable.

As earl, as 1872, I placed on record in an article published in the *Chicago Medical Examiner* certain observations in regard to the then newly discovered disease, inebriety. Those observations were directly and explicitly opposed to the theory, and after nearly eighteen years' additional experience, during which nearly ten thousand cases of alcoholism, with their complications, have been treated, my convictions remain unchanged.

The theory is being constantly urged, particularly by superintendents and physicians of inebriate asylums, that "drunkenness" is a disease, not a vice. Their ideas and peculiar views find ready believers and advocates in the friends of the more aristocratic class of those addicted to the intemperate use of alcohol and opium, and among the victims themselves, who do not care to attempt reformation. I am not aware that anybody ever thought drunkenness in a poor man a disease—it is always a class that are able to pay large fees to specialists, and those able to board at asylums at $50 per week (more particularly in the East), and coddled with the idea that they have a peculiar pathological condition, that we find the largest number of advocates of this, to me, pernicious and destructive theory.

More recently several medical journals have commenced to advocate these same ideas—some temperance lecturers proclaim it, and I am exceedingly sorry that many of our strongest and most faithful workers—ladies of the Women's Christian Temperance Union—believe it!

I desire at this time to affirm:

1st. That in my opinion there exists no physical cause which compels a man to become a slave to opium or alcohol.

2d. That ninety-five out of every hundred men who have formed the habit can reform if they desire; the remaining five are probably insane, should be treated as such, and not held accountable.

The trouble is, men will not use the means for reformation which are freely and entirely at their command. They desire to reform, they say, and yet insist in indulging in all other previous bad habits and associations. They say they desire to reform, but refuse any cultivation of the moral sense, any strengthening of the will. They desire a reformation which takes little or no effort—a cure which will enable them to practice all previous bad habits, mingle with all previous vicious associates, gratify all the lower feelings and passions, and to all of which I might add, use alcoholics *in moderation*, with no danger of ever becoming intoxicated. This is the kind of cure many desire. They do not want reformation.

I am constantly having gentlemen under my observation formerly addicted to the use of alcohol, men of great business capacity, men of fine moral sense, and with wills powerful enough to carry them directly in the way of duty, notwithstanding any reverses, disappointments or temptations, and yet they believe in the so-called disease, inebriety, and that they are victims of the malady. With these splendid business qualifications, with keen moral and religious senses, and with all will powers equal to any emergencies, they clamor for some specific medication which will do away with the appetite, which will enable them to take a single drink without the desire to take another. A man is reformed when his moral sense teaches him that it is wrong, and his will power is sufficiently strong to enable him to abstain from taking the first drink, and for such a person to assert that he is the victim of a disease is to me nonsense. It should be remembered that we are now speaking of men who have acquired the taste for stimulants, and have a desire for them. We speak of the desire or motive for taking them as the disease, not the condition they are in after the stimulant has been taken into the system.

Dr. Parrish, in the Third Annual Report of the American Association for the Cure of Inebriates, speaking of consumption and alcoholism, says: "The cough, hectic flush, night sweats and wasting of tissue are no more symptoms of disease in the one case than the injected and glaring eye, flushed face, confused speech and staggering gait in the other."

To me there is no comparison whatever between the two cases. Place these two patients in a room; supply the consumptive with a good generous diet and what medicine is necessary; supply the patient with the so-called alcoholic disease with a little nerve sedative, some beef tea, etc.; visit them at the end of four days, and mark the progress of their respective diseases. The consumptive has continued to fail; his emaciation is greater; his strength is not so good; he is worse. How is it with the other? His injected and glaring eye has disappeared; his face is no longer flushed; his speech is intelligible; his gait steady. In a few days he is ready for business. He will now stop drinking if he earnestly desires. In order to accomplish this, however, he must do what every man must do who is peculiarly tempted by appetite or passion—carefully avoid the temptation, and in every possible way earnestly and zealously perfect his manhood, and reformation will certainly crown the effect.

Alcoholics produce very grave changes in almost every tissue of the body, and as I have said, and shall say again, produce disease of every variety. But it is the motive, or impulse, or desire, that is called the disease. If a person is not responsible for an evil motive, or impulse, or desire, then we should not hold him responsible for all the calamities which come from partaking of alcohol. A man is not responsible for acts which absolute structural changes in his body compel him to do. I grant this of course; no one pretends that a man is to blame for the palpitation of a diseased heart induced by rheumatism, or for an enlarged spleen caused by chronic malarial poisoning. It is beyond the power of the will to prevent these maladies; they are of the body; they are diseases; we can not avoid them; they have a previous history and a regular course. There is a cause for the structural changes which really exist.

And now about inebriety: Is there any previous history? Any cause except the voluntary taking into the system a certain amount of liquor? Has any structural change taken place in the persons of the hundreds when the first drink is taken? Is there any inherent propelling cause why members of this Society or the business men of your city should go out and take enough liquor to render them absolutely unconscious; and yet business men and doctors do and can become completely under the influence of some alcoholic in one short hour. Shall we excuse them, and say that they are not responsible, and call it a disease? If this is a disease, how easy the cure compared with all other forms of sickness? Take a man who has drank continually for ten years; all at once he stops and never drinks again. We know them by the dozens. What has done it? What has cured the man of this "disease," this malady which has beggared his family for years and ostracised him from society? Is it any drug? Is it any change in some organ, where structural lesions had existed? Not at all. He simply made up his mind to not drink. Henceforth everything progresses well; the man is in perfect health: his business is excellent —never better; his family is happy; he conducts large and profitable enterprises; his mind was never as clear—his reasoning powers never so acute. This man, then, has been cured of his so-called disease without any medication, by a simple process of his will, and he remains so to the end of life. No other disease, the history of which I am acquainted with, is cured like this. Some may urge, however, that this is an exceptional case; that it is a recent case; that the appetite had not obtained control of the man. To this I say, that a study of a very large number of cases convinces me that a man who has drank ten, twenty or thirty years stops just as easy as one who has been addicted to alcoholic excess for a single month.

Our first duty, then, appreciating the extent to which alcoholics and opium are used intemperately, is to impress the people with the fact that only a very small per cent.—an exceedingly small per cent. of men addicted to this use—are the victims of any disease. It is at first and for a long time nothing but a pernicious habit, which can be overcome if we can succeed in gaining the attention more particularly of the young men, and convince them that it is for their own good. The trouble is to engage their attention; the trouble is that they refuse to believe that there is for them any danger. They are perfectly safe--the danger is to others.

At this stage in the consideration of this question I shall be met by the assertion, by some, that inasmuch as I do not believe in the disease theory of drunkenness, I must certainly admit that it is hereditary. My attention is very respectfully called to the sins of the fathers being visited upon the children, even to the third and fourth generation—and the anxious and kind-hearted relative and parent commences to excuse the drunkard on account of inheritance.

I will be asked if I do not believe that family peculiarities—resemblances, beauty, intellectual powers, etc., etc.—are handed down from parent to child.

They refer you to the scheme inaugurated by Laban for changing the color of his cattle, sheep and goats, and ask if you deny the fact that paternal impressions and peculiarities are not at the present day transmitted to offspring.

In reply I would say that I believe in all these things, but I can not see that it has anything to do with this intemperate use—the pernicious use of alcohol or opium.

If the appetite for alcoholics is hereditary, the appetite for opium is also, and of the many cases I have treated not a parent ever used it.

No, in my judgment, the appetite for drink is not hereditary. It occasionally looks as if it was, when we examine an individual case, but cumulate your observations and it appears differently. Look at an individual case in all its bearings and from all standpoints, and it does not seem so apparent.

Of 541 men examined during 1880, only eight cared to say that they thought the appetite which they persist in appeasing was the result of hereditary influence; and of 1,525 examined during the following four years, only thirty-one claim any influence of this kind, and an examination of 1,000 during the past year gives me the same results.

One other fact I desire to state, and then I pass to another point. This is a matter of experience; a matter of observation. A man is reared in a moral or religious family where liquor is never seen, and where the influence of heredity can by no possible way exercise any influence, but where indulgence and lack of early discipline is prevalent, and a general easy and indolent time is permitted. Let such a young man acquire the habit of drinking, and his reformation is more difficult than that of a young man coming up in a family where liquor is freely used, but very early he is taught to care for himself, to work, to obey those in authority, and to assume some of the responsibilities of life. That is to say, idleness and want of government are more important factors as causes of drunkenness than heredity.

This is not an easy thing to say. In some families it will not be admitted for a moment, such a remark will not be tolerated, but as physicans we know it is true. The law of heredity, so far as my information extends, applies equally to the male and female members of the same family. Let the advocate of the inheritance of inebriety explain to me why it does not follow the usual law.

One other question can be decided by our profession better than by any other class, and in my judgment we should acquaint the people of it. The vice of both alcoholic and opium inebriety does not produce such marked deleterious results upon the health of the masses as is generally believed. It produces quite as much distress in the family, blasts hopes, and produces untold suffering. It brings loss to the State, and is the most fruitful of all causes in the production of crime. But as a factor-producing disease I doubt whether it is greater than the peanut.

Among a thousand men whom I have treated yearly for several years the loss is from one to three. I think that I sign quite as many death certificates from Bright's disease among those who have been temperate as of those who have been intemperate. That alcohol and opium produce a very large number of those afflicted with mental disease, I do not deny. That pneumonia is very fatal in this class, I must acknowledge. But I must say that general observation and clinical facts lead me to affirm that the great majority of intemperate men and women are generally healthy people. My friends, it is not in physical disability to the man that this habit produces its most marked results: it is mental and moral; it is to the wife, to the children, to the community.

If the members of our profession will consider carefully the questions I have discussed, consider them carefully and without prejudice, I believe they would agree that in only the smallest part is the appetite for alcohol and opium a disease. That only in very small part is it hereditary, and that it does not produce disease to the extent we are led to believe.

What, then, is our duty to the people? Plainly, to educate them. To present to them facts, not fancy nor sentiment.

A bill introduced in our Legislature during its present session looking toward a more general diffusion of knowledge of the baneful effects of alcoholics and opiates is to be commended. This would be of immense importance to the youth. If it should ever become a law, however, it would be of the greatest importance that instruction based upon physiological and pathological facts should be imparted.

The temperance cause has suffered much from its friends; suffered because conclusions so at variance with established facts have been permitted to go unrebuked and unanswered.

Some years ago it was stated in a French journal of some repute that if you remove the calvarium from the head of one addicted to the use of alcohol, and apply a lighted match, a conflagration immediately takes place. Everything is consumed; cerebro-spinal fluid, brain substance and membrane.

The Rev. Joseph Cook, in a lecture delivered in Edinburg, proceeded to illustrate the action of alcohol on tissues, and particularly on the albumen in the system, by pouring alcohol on the white of egg. And the *Medical Press and Circular* is authority for saying that the same distinguished gentleman has stated that, by hardening the albuminous substances in the body, alcohol leaves scars in the brain and upon nerves which can not be washed out, or made to disappear by absorption, any more than scars upon the integument.

These statements, and many others, used to illustrate a supposed fact of importance and value, are not only not true, but they are such exaggerations that sensible men and women doubt every other statement made by the same persons.

With the facts which I have presented to you I again ask, what can the medical profession advise? What is our duty?

In the first place, our profession should be temperate men and women. First, for a selfish reason—it is better for us personally in every possible way—and, secondly, for example's sake. If meat makes my brother sin, then I will not eat meat.

In the next place, we should correct certain faults in our practice. Particularly in the indiscriminate prescribing of alcoholics and opiates.

What doth it profit if we gain the whole world for ourselves and damn a dozen souls? Why should we never cease a tirade against the proper use of alcoholics in sickness, possibly lose a valuable life, and yet prescribe without admonition an opiate to every one applying for a trivial pain. As between a single dose of alcohol and a single dose of morphine, I believe the former is preferable. The first in a single dose scarcely produces any deleterious effects. The second abolishes appetite, constipates, and is the more seductive.

In my judgment, the medical profession frequently do an irreparable wrong in prescribing without limitation an opiate for trivial complaints.

And there is no doubt in my mind that the medical profession are very largely responsible for the formation of the opium habit in a majority of cases. Look at the trivial causes for taking an anodyne, given by those of our profession who make up my list of thirty. One man says, pain in his head; another, pain in the stomach; and another, to assist him in his practice. To yield to such a temptation as this is not heroic. It is not bravery. And then, there is always the danger of becoming slaves to the drug.

What, then, can be done? It seems to me that we should work along the lines which I will indicate, and that our labors and influence should be addressed to the following classes and conditions of the people:

First: Our profession should be temperate themselves; should feel a responsibility in prescribing both alcoholics and the opium preparations, particularly to the young and to adults whom we know to be easily susceptible.

Second: Educate the young, those who know nothing of the habit.

Third: Work among those who seem honestly to desire a reformation, and are willing to accept the means which will produce it.

Fourth: Use our influence to legislate for that uncontrollable, incorrigible class who profess to desire a reformation, but, after short periods of abstinence, repeatedly fall, and have not only ruined themselves, but have discouraged and rendered miserable their relatives and acquaintances. This class is really a burden to the community.

As to what our profession should do I have already outlined my opinion: We, who should know better than any other class of men and women the effects of these drugs, should be the last to place ourselves within their grasp. It is cowardly, it seems to me, for us to place the example before the people of always taking an opiate for slight ailments. If we have been exposed to those causes which will produce in ourselves a tonsilitis, with great muscular pain and slight fever, it is not necessary for us to at once take a full dose of morphine to relieve all pain. We should know that one or two days' appropriate treatment without an anodyne will see a recovery. Nature is always able to throw off a slight indisposition like this, or many others to which I might call your attention. The same rule holds good with our patients. They do not need an anodyne or any alcoholic for such trivial complaints. Yet I fear that some physicians attempt to make a reputation by doing just exactly this thing. It has been remarked to me that Dr. So and So always prescribes something that makes me feel comfortable. This prescription is in many cases refilled and refilled, and is regarded as a kind of sovereign cure-all for everything. At last the patient discovers that he has been taking alcohol or opium, and is firmly within its grasp. I could multiply this illustration, but time will not permit. The habit of so frequently whipping out and using a hypodermic syringe is to me reprehensible, and under no conditions whatever should we teach a person how to use the instrument.

And now, in regard to the second class—that great number of boys and girls, all of whom we love, and we should be and are interested in their future. I am particularly impressed with the idea that the largest amount of temperance work should be among them, and that by every means possible they should be prevented from forming the habit of moderate drinking; that the law against liquor-selling to minors should be rigid and enforced.

The youth of our country, of all nationalities, should be made to feel that the cultivation of the taste for liquor is a dangerous habit; that alcohol in all its forms is a drug to be dreaded and avoided as strychnine or aconite, and that opium should be only given when imperatively demanded. Let parents in all conditions of life be made to feel, and educated to believe, that it is a dangerous practice to allow, and a fearful responsibility to encourage their children to drink the mild wines, beer or cider.

While I am writing this section of my paper, a gentleman fifty-two years of age, and one who has experienced all the degradation possible from drink, has lost his fortune, ruined his health, and is separated from his family, said to me: "Forty years ago I attended church three times each Sunday, and listened to sermons one hour in length each time, and in addition attended Sabbath-school, and during all these religious exercises for years I have never heard a word in regard to the baneful effects of narcotics. I commenced gradually, and knew nothing of its dangers." This is true of hundreds and thousands.

But, thanks to our educational temperance organizations, this is being overcome; and I trust that the time is not far distant when every parent will realize that it is not only not a smart thing, but a fearful crime to send their children to a saloon for liquors, and a much greater one to tempt them by offering sugar that is at the bottom of the glass.

What shall be done with our third class, those who have already acquired the habit?

Probably about twenty per cent. can be reformed the first time their attention can be arrested long enough to keep them perfectly sober. This can be done by rest, seclusion and education. Any way by which the alcohol and opium can be eliminated from the system, and a few days' rest for the body be taken, and then followed by encouraging words, a definite plan of work, and a resolution never to associate with former companions. If the question be asked: "Why have homes and asylums for inebriates been established and maintained at a cost of money and labor, if the habit of inebriation is not a disease, and only twenty per cent. saved?" I would reply, that after temperance organizations and societies, and churches and clubs, have done all that is possible, some of the most promising of those reformed will relapse from causes which I have just enumerated.

These men need a place where they can acquire strength; where, separated from their companions, their moral sense can be cultivated and strengthened. Some men reform in a moment; with others it takes months, perhaps years. Many men use alcoholics for years without the impairment of any function of the body; others are injured in nearly every organ. For those who need considerable time to perfect a reformation, and that class, too, whose constitutions have been injured by the voluntary use of alcoholics, and who, from habit and association, have not the moral sense to say No to an invitation to drink—to such, homes and asylums are houses of refuge. Reformation is a matter of development—not a "presto-change" affair, not done in the twinkling of an eye, but a matter of growth, a matter of development. A man who has been addicted to the inordinate use of alcohol and opium is never safe. He must be on his guard. A reformed man must be taught, and the lesson must be well learned, that let come what will—sickness, trouble, death, reverses, singly or all combined—that he can not with any safety touch a drop or he will fall.

No class or profession of men see so many of these unfortunates as our profession. We should be able to tell these men that it is their duty to fight this appetite, if they have been so unfortunate as to form it, and that there is no drug that can take it entirely from them.

What is to become of the remaining per cent? I stated, it must be remembered, that I thought about twenty in each hundred could be quickly reformed if we could get access to them. What about the remaining eighty?

Quite a number will reform after repeated trials and failures; a few, after education upon the subject, will drink less—are improved, but not reformed. A considerable number go to form the fourth class, the description and treatment of which I will not speak.

These can not be reformed either through the influence of rest, seclusion, or by the moral strength acquired in a reformative institution. These are the uncontrollable, incorrigible, disquieted men, who have not only discouraged but rendered miserable their relatives and all their acquaintances. They have never learned to obey; they are undisciplined, and generally lack all feeling of responsibility. They are the men who beat their wives and starve their children; the men who steal the hard-earned money from their wives' purse, and the knives and napkins from their tables, to buy alcohol or opium, and when perfectly sober or free from the drug, if you expostulate with them, they will laugh, and assure you that they know their own business. The State should assume the guardianship of this class, and should put them in an institution whose management should be remarkable for its kind administration of affairs and for a discipline most rigid. This institution should be situated on a farm, and men of this class sent there for not less than two years. From ten to twelve hours' work every day during this commitment, combined with judicious and strict discipline, with the assurance that the State would again assume charge of them if they returned to their former habits, would produce an effect on these men which would result in the reformation of nearly all. Let them learn that it is some one's business if they become absolutely indifferent to all the responsibilities of life. The medical profession should be alive in bringing about such sentiments, and by precept and practice enable them to become laws. Let us be in a position to educate the young and those of maturer years so that the second class shall not form the habit. The third class we are always ready to assist, and regarding the fourth class, those uncontrollable, incorrigible, undisciplined men and women, let us, in the language of Dr. Bucknell, bring about a sentiment that "These men are not to be 'coddled' in luxurious indolence, nor impressed with the pernicious idea that they are interesting but helpless objects of social and psychological science."

Translations from Our Foreign Exchanges.

Translated for **Medical News**, from the French, by Dr. Illowy, Cincinnati, Ohio.

HEMIPLEGIA IN SOME NERVOUS AFFECTIONS.

It is now well known that hemiplegia, without cerebral hemorrhage, is found more frequently than was formerly believed. Mlle Bl. Edwards, in her theses, has been able to collect a number of facts demonstrating that the proportion is greater than generally supposed, for she herself has had under observation in a period of time of two years, in two medical services, seventeen cases connected with tabes, with hysteria, with paralysis agitans. It is therefore well to examine every case of hemiplegia closely, and not content oneself with the trite diagnosis of softening or hemorrhage.

Hemiplegia is relatively frequent in locomotor ataxia, and here it presents itself under a transitory form or under the form of a permanent paralysis.

In the first case the paralysis lasts from several hours to several weeks, with frequent relapses either of the same or of the opposite side; in general it is complicated with paralysis of other muscular groups (eyes, face).

Permanent hemiplegia is also rather frequently encoun-

tered in tabes; it may occur either suddenly with or without apoplectic stroke, or establish itself gradually; it is accompanied ordinarily by hemi anæsthesia, and frequently also with sensorial anæsthesia; finally aphasia may constitute one of the complications of tabetic hemiplegia. We see thus that this hemiplegia has great analogy with the common hemiplegia. However, we should suspect its tabetic nature, if there be present with it paralysis fugitive, transitory, recurring, or paralysis affecting muscular groups that are outside of the hemiplegic zone; the diagnosis will be almost certain if we find simultaneous ocular troubles, troubles of the muscular sense of the sensibility, and finally, if we find abolition of the patellar reflex and of that of the wrist, especially of the paralyzed side.

Hemiplegia is also very frequent in *Sclerose en plagues.* Charcot says that it occurs in one-fifth of the cases, and M. Maris found it present in seven cases out of fifteen in children. Sometimes it is completely confounded from the standpoint of the signs with hemiplegia from softening. There are, however, in some cases, some particular signs: To the apoplectiform debut correspond fever, an elevation of pulse and temperature which attains 101°—102°, whilst in cerebral hemorrhage, the temperature at the outset, at least in the first twenty-four hours, remains below the normal. The progress is very variable, and the apoplectic seizure may terminate in quick death, with eschar.

The hemiplegia may establish itself, then disappear; and this is its real mode of procedure. But there is one important point to be noted from a diagnostic point of view, and that is this, that this form of hemiplegia is observed ordinarily in young persons; a marked characteristic that distinguishes it from common hemiplegia. Finally, this hemiplegia is frequently fugitive or repeated, and is accompanied by paralysis of the ocular muscles.

Hysterical hemiplegia constitutes a syndrome, which frequently presents itself, and which, despite the numerous works of which it has been the subject, is frequently not recognized. These are its principal differential characteristics: The face is respected, or if there be deviation of one side of the face, the trembling of the upper lip, the deviation of the tongue, the conservations of these movements demonstrate that it is here a question of a concomitant glosso-labial hemi-spasm. There is habitually hemi-anæsthesia of the paralyzed side; there may be anæsthesia in plagues, and finally frequently sensorial hemi-anæsthesia. There are other stigmata or hysteria present, and finally aphasia when present, presents itself in the form of hysterical mutism (impossibility of emitting sound, conservation of written language, paralysis of vocal cords). The apoplectiform seizures should be especially frequent in hysterias making their debut on the occasion of an intoxication (saturnine, mercurial, alcoholic).

Mlle Edwards also calls attention to an error frequently committed on the subject of paralysis agitans. The malady of Parkinson may indeed have a unilateral debut which will very much resemble hemiplegia, by the stiffness and the difficulty of movement of one side of the body; by the fluffy face which gives the aspect of the hebetude of softening; and by the possibility of a spasmodic deviation of one side of the face. We can recognize a case of paralysis agitans of unilateral beginning by the following symptoms: by the possibility of all movements active as well as passive, that are not abolished, but simply difficult; the stiffness of the joints so well marked at the outset; no modifications in the reflexes, in the sensibility, in the muscular sense; lack of all ocular or cerebral trouble. The patient remains in possession of his intelligence; the stiffness of the back and neck bringing about the impaled aspect of these patients.

This is an important diagnosis to make on account of the prognosis. Intellectual obnubilation and loss of sense of cleanliness are wanting in the course of the malady of Parkinson.

It is interesting to note from an anatomical standpoint, that there is no constancy in the lesions which determine this syndrome. And if there has sometimes been found in ataxia a variable lesion situated on the course of the pyramidal fascicular in the permanent hemiplegias, there have been other cases in transitory hemiplegia in which these have not been found; and in the other affections studied here, all lesions visible with the means at our disposal were actually wanting.—*Journ. de Med. and de Chirug.*

EMBRYOCARDIA.—Dr. Huchard designates under this name or under that of fœtal rhythm of cardiac bruits, a particular rhythm which is a sign of great gravity in typhoid fever. It is more especially characterized by the acceleration of the beats of the heart or tacchycardia; equalization of duration of the two silences; similitude of timbre and of intensity of the two sounds. This symptom responds to two anatomical states, a state of degeneration more or less advanced of the myocardium and extreme weakening of arterial tension. —*Ibid.*

CREOLINE FORMULA.

For Inhalation.

Creoline, . 1 decigr.—.05 Centigr.
Aq. Destill., . 500 grms.
Epent. Pin. Pumil. gtta x—xx. (or Epent. Menth. Pip. same quantity).

Creoline, . 1 decigr.—.05 Centigr.
Aq. Destill., . 200 grms.
Aq. Menth. Pip., 50 grms.
Potass. Chlorat. } āā 5 grms.
Aq. Laura Ceræ }

For Insufflation.

Creoline, . 1 decigrm.—.05 Centigr.
Alum pulv., (or Tannic acid or Bismuth Sub. Nitr. in same quantity).
Sacch. Alb., . āā 5 grms.
Epent. Menth. Pip., gtta x—xx.

Creoline, . . 25 Centgrms.
Calci Phosphat. 10 grammes (or Carbonate of lime in same quantity).
Epent. Menth. Pip., gtta x—xx.

Creoline, . 1 decigr.—25 Centigrms.
Acid. Boric. .
Sacch. Lact., āā 5 grammes.
Epent. Menth. Pip., gtta x—xx.

For External Use—Wash.

Creoline, . 25 Centigr.—5 decigrm.
Glycerine. . .
Aq. Destill., . āā 10 grammes.
Epent. Menth. Pip., gtta x—xx.

For Internal Use.

Creoline, . 01—05 Centigrms.
Ole. Jec. Ass., . 1—2 grms.
Put in one Gelatine Capsule.
Dispense 50 such Capsules. Sig. Take 5 to 10 capsules per day.

Creoline, . 1 grm.
Pulv. Menyanth
Extr. Gentian } āā q. s. to make 50—100 pills.
Dust with powder of Cannella. Sig. Take 5—10 pills per day.

—*Journ. de Med. de Paris.*

TUBERCULOSIS OF THE VAGINA.

We find in the very complete treatise of Dr. Paul Davies on genital tuberculosis of women, a chapter relative to the tuberculosis of the vagina and cervix, localization more frequent than certain authors will allow.

Tuberculosis of the vagina and cervix may present itself under three clinical forms; an acute miliary form, an ulcerous form and a form which might be called the fistulous form.

The acute miliary tuberculosis is mostly a post-mortem find in patients who have succumbed to an acute tuberculosis, and there is no necessity for insisting further upon it here.

The tuberculous ulceration of the vagina and of the cervix is a chronic form; much more frequent. It is either primitive or secondary. In the first form it appears generally in rather an insidious fashion, hardly announcing itself by some vulvar pruritus, more rarely by slight uterine or vaginal pains. Leucorrhea or troubles of menstruation are most frequently the symptoms which first draw the attention of the patient to this region. At this period the lesion is already advanced, and by the touch we can discover either a soft and ulcerated neck, or a cervix simply large and softened. The finger carried along the length of the vaginal parietes will soon discover now one or more small ulcerations well limited, cup-shaped ulcerations with hard and raised borders, now but a single ulceration with the same raised and indurated borders, but serpiginous in form, occupying the cervix and a part of the vagina, or starting from the cul-de-sac and descending to the vulva (Mayor). If pressure be made in the vicinity of these ulcers, pain is produced.

By the aid of the speculum we can see on the cervix round or crescentic ulcerations occupying one of the lips, at a certain distance from the orifice, and continuing perhaps on the vagina. Frequently the ulceration occupies the vaginal parietes only, and generally the posterior wall. These ulcerations may be multiple and distended over the whole extent of the vaginal canal.

Whatever be their seat, these ulcerations always present the same appearance: borders perpendicular, undulating, unequal and red; base depressed, cup like, grayish yellow, more or less covered with a caseous product. Around these ulcerations are seen, in a majority of cases, small yellowish grains opaque or transparent, which are of the greatest importance in the matter of diagnosis. These are granulations, variable in number, from which no liquid escapes when they are pricked, but which may, in the course of a few days, be transformed into small ulcerations, which may unite with the previous ones.

All these characteristics have great similarity with those of tuberculous ulceration of the tongue. A microscopic examination for bacilli should be made whenever possible.

The tuberculous fistulas, which constitute the third form of vaginal tuberculosis, may occupy either the anterior or the posterior parietes of this canal. If anteriorly we may have to deal with a vesico-vaginal or a urethro-vaginal fistula. Posteriorly recto-vaginal fistulas form. In these various cases the symptoms vary with the nature of the fistula, but so far as tuberculosis is concerned, we can say that the symptoms are always those of a tuberculous ulceration, with lesions more advanced; having produced a fistulous tract, the orifice of which is situated in the center of the ulceration.

We shall only enumerate certain lesions which may present some difficulty to differentiate diagnostically from tuberculosis of the cervix and vagina. In the first period there are: follicular inflammation of the cervix, a herpetic eruption, granular vaginitis. At a more advanced period there will be: simple ulcerations of the cervix, simple chancre, syphilis and epithelioma. There are frequently great difficulties in the way of this diagnosis, and the progress of the malady does not always clear it up.

It is remarkable, in fact, that by treatment many of these ulcerations heal in a very short time. The treatment consists in the topical application of tincture of iodine every second or third day. On this point, however, Dr. Daurios is somewhat reserved, and if there are cases where he has succeeded, there are others where he has not. Surgical intervention may then become necessary, and this, to be efficacious, should be very complete, and necessitates the supravaginal amputation of the cervix or even total hysterectomy. —*Journ de Chir. de Med.*

ANGINA PECTORIS—*Dujardin Beaumetz.*

℞.	Cocaine Hydrobromate,	grs x
	Alcohol,	ggt 15
	Aq. Destill., Laura Ceras,	ʒvi

M. Sig. Inject hypodermically during the seizure one-fourth or one-half of a Pravoz syringe.

ACUTE SIMPLE CATARRHAL RHINITIS—*Cozzolino.*

℞.	Ammon. Chlorid.,	grs 45
	Soda Salicylat.,	grs 30
	Potass. Chlorid.,	grs 45

M. Sig. For snuff.

SCROFULOUS RHINITIS—*Cozzolino.*

℞.	Zinc, Sulfo-Carbolat.,	grs v
	Bismuth Salicylat.,	ʒi
	Iodol,	grs vi
	Zinc, Tannat.,	ʒss
	Talc. pulv.,	ʒyss

M. Triturat. bene and ft. pulv. Sig. To snuff.

FOR ERYSIPELAS—*Colvelli.*

℞.	Acid Picric,	3 parts
	Aq.,	500 parts

M. Apply externally 5—6 times daily.

—*Union Med. de Can.*

Selections.

Arsenite of Copper as a Remedial Agent.

BY JOHN AULDE, M.D., PHILADELPHIA, PA.

Demonstrator of Clinical Medicine and of Physical Diagnosis in the Medico-Chirurgical College of Philadelphia.

DURING the month of September last a brief note appeared in one of the Philadelphia medical journals which was intended as an epitome of my experience with the use of arsenite of copper in the treatment of bowel affections, but more especially in cholera morbus. In recounting the results of my observations, I referred incidentally to the fact that the remedy had been called to my attention by Dr. Boardman Reed, of Atlantic City, N. J., well known to the readers of this journal, who candidly admitted its superiority for the relief of cholera morbus and kindred affections. An extract from the publication will serve to indicate my earlier observations, and what I have to say at present will be confirmatory of that report, together with a record of some illustrative cases, showing more fully its therapeutic value. The following is the extract: "It [arsenite of copper] was used in probably twenty cases of bowel troubles, in patients ranging from one year up to sixty or more, and varying from simple colicky pains to diarrhœa and vomiting of several days' duration, and one case of acute dysentery accompanied by profuse bloody discharges from the bowels, and in every instance the treatment proved eminently successful; not a single failure occurred, and, as a rule, the pain and tenesmus subsided after the first hour, or after the taking of the first five doses" (*Medical Register*, September 8, 1888, page 230).

In the following summary my remarks will be confined to such cases of bowel affections as are most frequently seen by the physician during the summer season and to cases of typhoid fever.

It will be appropriate, however, to say a word regarding the composition of the remedy, which will be useful to those who feel disposed to investigate the subject for themselves. This information should include the method of preparing the drug, as well as some reference to its pharmacology.

Arsenite of copper is known in commerce as Scheele's green, and is a fine, green powder, composed of arsenious acid and oxide of copper, one part of the former to two of the latter. It is soluble in ammonia and nitric acid, and yields crystals of arsenious acid by sublimation. Cupric arsenite differs from aceto arsenite, which is variously known as Paris green, Schweinfurt or Brunswick green, Vienna or emerald green, the pigment used for staining wall paper, dress goods, artificial flowers, and other classes of millinery. Paris green is recognized as an active poison, and is frequently used by the farmers in the rural districts for the destruction of potato bugs and other insects. Its well-known activity has led to its use by sufferers from melancholia for the purpose of terminating life, while its use as a pigment has frequently been followed by cases of arsenical poisoning which were often difficult to understand. Paris green contains a much larger proportion of arsenic than

Scheele's green, which accounts for the active toxic symptoms, while the presence of acetic acid probably assists materially to increase its diffusibility when taken into the system or applied externally.

Cupric aceto-arsenite contains six parts of arsenious acid, two parts oxide of copper, and one part of acetic acid, and may be identified by the usual chemical processes, and when heated in a test-tube, gives off fumes of acetic acid, crystals of arsenious acid being deposited, the residue left being the oxide of copper.

For medicinal use, the arsenite of copper is prepared as follows: To one part of arsenite of copper in fine powder, a sufficient quantity of sugar of milk is added, and trituration begun; additions are made of sugar of milk, trituration being continued, and sugar of milk added sufficient to make the quantity up to one hundred parts. One grain of this trituration, therefore, contains one one-hundredth grain of cupric arsenite, and for all practical purposes this method of preparation is sufficient, as a single grain will readily dissolve in water, and the division into small doses is thus more conveniently secured. When desired, this form of powder may be prepared in the form of tablets, containing one grain each, by which each tablet is made to contain definitely one one-hundredth grain. Particular attention is here given to the method of preparation, for the reason that my observations have been confined to the use of arsenite of copper clinically in quantities not exceeding the one one-hundredth grain, and, when prepared in the form of tablets, its administration is extremely simple. A single tablet containing this amount should be dissolved in from four to six ounces of water, the dose of the solution being a teaspoonful. The quantity thus prepared will be sufficient for from thirty to fifty doses. Of this solution the patient is directed to take a teaspoonful every ten minutes for an hour, after which the remedy should be repeated at less frequent intervals; as a rule, however, these intervals do not exceed one hour, and the medicine is continued regularly while the patient remains awake.

By a simple mathematical calculation it will be found that the exact quantity taken at each period approaches the infinitesimal, and some of my friends have been disposed to look upon the matter with credulity. References in the medical journals to my report, shortly after its publication, indicated that it was looked upon more as a curiosity in medical literature than an addition to our therapeutic resources. A medical friend, more skeptical than the rest, was induced to accept a small sample of this powder, to be used probably in the first emergency, when nothing else was at hand, or when the patient was suffering agonizing torture, while waiting the delay of the druggist. It so happened that, within a week or ten days, he was summoned to attend one of his patients who had been subject to frequent, but somewhat irregular, attacks of intestinal colic, which, on previous occasions, had given him no end of trouble. All remedies had been tried, but with varying degrees of success, and at times these attacks were so serious that the patient was laid up for several days, when hypodermic medication afforded the only means of relief. On the occasion referred to, the symptoms pointed to a severe and prolonged attack, and in a moment the idea flashed upon him that his case would furnish a crucial test of the therapeutic value of the remedy. Without any hopes of witnessing good results from its use, the solution was prepared as above directed, and the patient instructed to take teaspoonful doses at intervals of ten minutes while the doctor in the meantime sat down to consider the propriety of following up the old methods. His surprise may be imagined, when, after taking the second dose, the patient expressed herself as feeling somewhat relieved, and at the expiration of twenty minutes, or after the third dose had been swallowed, the pain and all distressing symptoms had so far subsided that further medication seemed unnecessary, although the medicine was continued until near the end of the first hour.

The pharmacology of cupric arsenite will be written hereafter; our present knowledge of its physiological action must be largely hypothetical. That it partakes of the alterative character of arsenic, and like the remedy, when used in small doses, presents the characteristic features of a sedative to mucous tissues, will be apparent from its value in gastro-intestinal derangements. Whether arsenic alone would be sufficient to overcome acute affections like cholera morbus is a question which would probably be answered in the negative, but when combined with the oxide of copper in the proportions given above, we are warranted in assuming that the combination possesses astringent as well as sedative properties.

Clinical observation confirms this theory, and experience has abundantly shown its efficiency when administered in medical literature than an addition to our therapeutic resources. A medical friend, more skeptical than the rest, was induced to accept a small sample of this powder, to be used probably in the first emergency, when nothing else was at hand, or when the patient was suffering agonizing torture, while waiting the delay of the druggist. It so happened that, within a week or ten days, he was summoned to attend one of his patients who had been subject to frequent, but somewhat irregular, attacks of intestinal colic, which, on previous occasions, had given him no end of trouble. All remedies had been tried, but with varying degrees of success, and at times these attacks were so serious that the patient was laid up for several days, when hypodermic medication afforded the only means of relief. On the occasion referred to, the symptoms pointed to a severe and prolonged attack, and in a moment the idea flashed upon him that his case would furnish a crucial test of the therapeutic value of the remedy. Without any hopes of witnessing good results from its use, the solution was prepared as above directed, and the patient instructed to take teaspoonful doses at intervals of ten minutes while the doctor in the meantime sat down to consider the propriety of following up the old methods. His surprise may be imagined, when, after taking the second dose, the patient expressed herself as feeling somewhat relieved, and at the expiration of twenty minutes, or after the third dose had been swallowed, the pain and all distressing symptoms had so far subsided that further medication seemed unnecessary, although the medicine was continued until near the end of the first hour.

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Clinical observation confirms this theory, and experience has abundantly shown its efficiency when administered in small doses in nearly all classes of acute intestinal affections.

The claim will be put forward that the dose is too small to produce any marked effect. By some the gratifying results which follow its use will be said to be due to its selective action, by others it will be pointed out as a clear case of special affinity, but it is doubtful if either explanation does more than serve as a cloak for ignorance; and the minuteness of the dose prevents our accepting it as a case illustrating the substitutive action of a remedy. Evidently it illustrates a factor in the treatment of disease which is too frequently overlooked—viz., that the effect upon the economy of the exhibition of drugs is of a twofold nature; in other words, that it is a resultant dependent upon the presence of disease and the exhibition of the drug. If the disease were absent, the drug would not produce any appreciable effect, but with the disease the medicine produces an effect in accord with its power over the nervous system. An illustration may be of value in clearing up this somewhat complicated problem, and we may select for the purpose the case of peritonitis. The late Dr. Alonzo Clark, by the exhibition of massive doses of opium, showed the remarkable tolerance of the system for that particular drug. A patient suffering from peritonitis was permitted to take sufficient opium in the course of twenty-four hours to kill half a dozen men, and apparently no bad results attended upon its use. The modern use of salines in like conditions depends upon a different principle, but the use of atropine in combination with morphine previous to the inhalation of chloroform or ether, is similar to the use of opium in peritonitis. The timely administration of atropine and morphine will prevent shock, but it is doubtful if the early administration of opium would prevent peritonitis, although it was at one time believed that it exercised a favorable influence upon the progress of the disease. Now these influences, whatever they may be, must be effected through the nervous system, and it is not beyond the range of possibilities that in such manner the arsenite of copper may produce its effect in the treatment of inflammatory affections of the alimentary tract.

Clinical Applications.—Before me I have a list of a dozen or more cases that have occurred in practice within the past month, which I should feel warranted in classing as typical instances to be found in general practice. An account in detail would be tedious, and, besides, is unnecessary; so it will be sufficient to pass them in review, pointing out some of the most common symptoms presenting.

Elsie is a little girl of four summers, and has not been eating very regularly for a week or so, but only within a few days has there been any trouble with the bowels. The stools are frequent, yellowish, and slimy, and with each movement there is considerable pain; the tongue is coated, skin sallow, and the whole appearance indicates a condition which may be expressed in one word—weariness—but she does not show any tendency to sleep. The probabilities are strong that we have to deal with a malarial element, but attention is first directed to the condition of the bowels by the administration of arsenite of copper. The child is better the next day; in fact, the mother says she was lively after an hour or two, and has been quite bright, and offers to play with the other children. Antiperiodic treatment followed and resulted in complete recovery.

Mr. T. is a man over fifty, a farmer, and has been suffering from diarrhœa for several days. All the domestic remedies have been tried in vain, but the use of arsenite of copper, one tablet during the evening of the call and another the next morning, was all that was required to correct the difficulty, although he said he was quite well next morning after taking the medicine for the evening previous.

John H. is a hard-working young man, a grave-digger, and for some days now he has been very much depressed; there is a loss of appetite, abdominal pain, weakness, and sleeplessness, and a slight rise in temperature, with a pulse of one hundred and twenty; the stools are watery, offensive, and have been as frequent as ten in the day. Everything points to typhoid fever, but, as the arsenite of copper is a useful remedy in that disease, he is placed upon that, and is given a supply sufficient to last two days, at which time he is to return unless he is much better. He visited the office about midday, and went immediately home and began taking the medicine, and was able to go to work on the following morning, although still weak from the effects of the diarrhœa.

Henry is a boy about nine years of age, who has been under domestic treatment for the past few days for looseness of the bowels. He has great pain, frequent movements from the bowels, is languid, no appetite, but great thirst, and complains all the time of headache. Has had nosebleed the afternoon of the day the mother called, and she is greatly exercised for fear that the boy is taking typhoid fever. The vomited material is of a grayish, slimy appearance, and he has slept but little for several nights. For that evening this patient was to take one tablet of the arsenite of copper between eight o'clock and bedtime, and in the morning he was to take the remedy again in the same way. The understanding was that, should the boy's condition not appear to be improved, I was to be advised; but no tidings were received until the next day, when the mother called, and said Henry was all right when he awoke the morning after taking the medicine. The real cause of this attack I have not been able to determine, as an older child had a similar trouble several months ago, but was relieved in the same manner as this one, except that recovery was less prompt. He was confined to the house for several days, but had been laid up for some time when I first saw him.

The value of arsenite of copper in the treatment of typhoid fever should not be overlooked, although I do not advance it because of its germicidal or antiseptic properties, but on account of its great value in the treatment of non-specific bowel-troubles which are so common at all seasons of the year. In the early history of this disease it is often extremely difficult to determine the real character, so frequently is its oncoming masked by complications. The patient will sometimes complain of supra-orbital neuralgia and nothing more; another time it will be apparently a clear case of malarial cachexia; and, again, it will be simple nervousness of which the patient complains; but whenever there is the least indication of derangement of the bowels, or if there is an elevation of temperature, along with the acceleration of the pulse, and other symptoms confirm the suspicion, I always take the precaution to administer the arsenite of copper, confine the patient to bed, upon a restricted or a milk diet. Following up this plan for a year, I have seen the best results, and think it is not beyond the bounds of truth when I say that many cases which ordinarily would have advanced to typhoid fever, in the course of a few days, have taken a decided change for the better, and the danger has been averted. The symptoms of this malady are so well known that it would be a waste of time to enumerate them, and it will be sufficient to say that some of these suspected cases have continued for as long as a week before the disappearance of the elevated temperature in the evening. That they were of malarial origin may be suspected, but in a number of instances this matter was taken into consideration, and decided in the negative, because lately they have all been subdued by the use of arsenite of copper alone, except where there was great prostration, owing to the delay in consulting the physician, when nux vomica in small doses was added to the treatment.

The method of administration in typhoid consists in the use of a single tablet containing one one-hundredth of a grain, daily, the medicine to be distributed throughout the day by solution of water. In cases as ordinarily seen, its addition to other treatment is always attended with the best results; the temperature shows a favorable change, the pulse is less frequent, there is an improvement in the abdominal pain and in the frequency of the stools, and vomiting is controlled better than by the use of almost any other remedy. When this drug is employed, it has always seemed to me that the need for other remedies was largely superseded by it, the treatment of the disease being for the most part symptomatical, and it is with no little satisfaction that I offer it to the medical profession as an adjuvant to our therapeutics in this affection.—*Therapeutic Gazette.*

Association of American Physicians.

Fourth Annual Meeting, held in the Army Medical Museum and Library, Washington, D. C., September 18, 19 and 20, 1889.

THE PROGRESS OF MEDICINE DURING THE LAST FIFTY YEARS.

THE immediate causes of the great advancement of medicine were the growth of physiology and pathology, including bacteriology, and the improvements in clinical and laboratory teaching of the present day, which have led to a better acquaintance with the nature and causes of disease, to a more rational and successful therapeutics, and to the prevention by means of hygiene of a large number of diseases, including some of the most fatal. These means have been greatly aided by the progress of science in general, and by the conveniences of modern civilization, which enable observers from different countries to assemble together for interchange of knowledge and experience. A large share of medical progress is also due to the dissemination of knowledge by means of well-conducted journals, which enable thousands of practitioners who can not leave their homes, to be constantly supplied with the most recent discoveries relating to pathology and the diagnosis and treatment of disease. The organization of this Association is particularly adapted for the progress of medical science, representing no one section of our country, but including practitioners from all parts of the United States and Canada, whose experience, knowledge, observation and ability are brought together for comparison and for mutual instruction.

The President reported the deaths of the following members: Drs. H. D. Schmidt, New Orleans; John C. Dalton, New York (honorary member); Robert Palmer Howard, Montreal; and Edward T. Bruen, Philadelphia.

Dr. C. F. Folsom, of Boston, read a paper entitled

THE EARLY STAGE OF GENERAL PARALYSIS.

The author first reported a number of cases illustrating the early stage of the disease, in which the motor disturbances were very slight, and might readily be overlooked and escape detection. The striking loss of muscular control or power, generally considered a part of the disease, was not found until a late period of the disease. The mental symptoms consist in impairment of a peculiar quality, often so slight as to be made out with difficulty.

The disease arises most commonly under prolonged strain, particularly when associated with unaccustomed excesses. At least two-thirds of the general paralytics have had syphilis. The relation of the disease with syphilis is too frequent to be accidental. The disease is, however, not a stage of syphilis, and is not benefited by specific treatment. The prognosis is probably not so hopeless as it is generally considered to be.

The common early treatment is harmful. Foreign travel is injurious. The only hope of at least partial cure or marked amelioration is in entire mental and physical rest.

DISCUSSION.

Dr. Robert F. Edes, of Washington, reported the case of a man suffering now from pronounced general paralysis, in whom the first symptoms of the disease made their appearance some twenty years ago. If the anatomical view of general paralysis is accepted, he did not consider it strange that mental symptoms might precede the motor, depending upon the seat of the lesions.

Dr. S. Weir Mitchell, of Philadelphia, was sure that certain cases of general paralysis began most markedly with motor trouble, while others began most decisively with mental conditions. In regard to syphilis, he agreed with the author, except that he had seen cases due to syphilitic disease in which cure followed specific treatment. He had also seen cure follow, in a small number of cases, where the treatment was begun in the early stages, but where the motor disturbance and the mental incapacity were sufficiently marked to render the diagnosis reasonably certain. In all of these cases there had been a total abandonment of all previous pursuits, with absolute mental and physical rest. He agreed with the author that foreign travel was often injurious.

Dr. James J. Putnam, of Boston, remarked that the fact that syphilis acts in this disease, not by producing a direct lesion, but in an indirect manner, justifies us in looking for the other causes of degeneration which might act in a similar manner. He asked if the reader had seen any cases in which chronic lead-poisoning was the apparent cause of the general paralysis, and related a case in which the imperfect and slow speech, the imperfect handwriting, and the expression of apathy and indifference, suggested a diagnosis of general paralysis. In this case there was, however, a history of drinking of water contaminated with lead, and there were certain local symptoms indicating lead-poisoning.

Dr. William Pepper, of Philadelphia, believed that he saw these cases from a different standpoint than that of Dr. Folsom. They come to him as cases of dyspeptic lithæmic disturbance and the like, and are under his care for some time before symptoms leading to recognition are developed, sometimes for years before the paretic symptoms appear. He could not regard syphilis as in any way essential in the causation of general paralysis. In regard to the early stages of the disease, there was not one symptom mentioned by Dr. Folsom, or described by others as indicating the early stage, which he did not often find in cases of nervous lithæmia. There may be a grouping of these symptoms, or a delicacy on the part of the diagnostician, which will enable a finer and finer shade of these differences to be recognized, which does constitute a basis of diagnosis. He thought that general paralysis could be initiated by many disturbing, depressing, or irritating causes, and that in its early stages and slight degrees it was capable, not rarely, of being entirely cured. If these cases are permitted to go on with neglect of hygiene and with excesses, sexual, alcoholic, or business, a notable proportion will end with symptoms of general paralysis.

Dr. C. F. Folsom, of Boston, said in regard to lead, that while he had seen cases in which this agent had produced symptoms similar to the initial symptoms of general paralysis, he had not seen a case in which the terminal symptoms of general paralysis had been produced. As illustrating apparent cure after specific treatment, he referred to a case in which the use of large doses of iodide of potassium apparently produced complete recovery, and the patient returned to his previous business. The symptoms after several months reappeared, and have continued to steadily progress. Whether this is the result in all such cases, he was unable to say.

Dr. James Stewart, of Montreal, read a paper entitled

TETANY.

The details of the following case were referred to:

The patient, a male, aged forty, has been troubled during the past eight years with regularly recurring attacks of tetany. He served as a soldier during the American civil war. Suffered at that time and subsequently from chronic dysentery and malarial attacks. For upward of ten years he has been troubled with diarrhœa. Patient is tall, emaciated, and anæmic. The first subjective symptom of his tetany is usually double vision, which is quickly followed by characteristic contractions of the flexor muscles of the hands. Occasionally, the flexors of the forearms and the adductors of the arms become spastic, muscles of the face almost constantly suffer, muscles of the lower extremities rarely. The affected muscles are the seat during the attacks of fibrillary twitching. The attacks often last several days (seven to twelve), unless terminated by the very free use of morphia.

The galvanic irritability of the nerves is found to be greatly increased, also the mechanical irritability of both nerves and muscles. Knee jerks exaggerated during attack, absent in intervals. Œdema of the hands and arms, with herpetic eruptions, frequently to be seen after particularly severe attacks. The quantity of urine excreted during attacks is usually normal in amount, and contains urea and indican in great excess. Patient has been under observation for more than three years, and it has been noticed, during the past two years, that he has been getting gradually dull and apathetic. It takes him a long time to answer questions, he complains of general numbness, his face and lips are swollen; symptoms closely resembling those seen in myxœdema.

Tetany may be divided into four varieties:

1. Epidemic or "rheumatic" tetany, common in Europe, but extremely rare in America. The course is acute and favorable.

2. Tetany from exhausting causes, as lactation, diarrhœa, etc. Course is chronic and favorable.

3. Tetany from removal of thyroid glands. Course generally is usually either quickly fatal or chronic and incurable.

4. A form of tetany occurring in cases of dilatation of the stomach. Very fatal.

Infantile tetany is excluded from above division, as what is so frequently called tetany in infants is not that disease. No doubt, true tetany may occur in childhood.

Experimental Tetany.—When the thyroid gland is removed from cats, dogs, or monkeys, a condition very similar to the typical tetany of the human subject is observed, viz., fibrillary tremors and intermittent spasmodic contractions. Death usually follows in a week, and no change can be found to adequately account for it.

The fact that there is a great increase in the electric irritability of the nerves after the removal of the thyroid gland is strong evidence of the similarity of the tetany of man and animals. Of the many forms of muscular contractions seen in man, in none, with perhaps the exception of cholera, do we find any marked increase of the electric irritability of the nerves and muscles.

Morbid Anatomy.—No changes that in any way can be considered characteristic have been described.

Nature of.—All recent observers tend to confirm the conclusion of Schiff, that the tetany following removal of the thyroid gland is directly due to the loss of the gland, and that the thyroid gland in some way has a direct influence over the nutrition of the nervous system. It is difficult to explain how causes so diverse in their operation, as "rheumatic" influences, diarrhœa, pregnancy, lactation, and removal of the thyroid, can induce similar symptoms. It appears probable that improverishment of the nerve-centres is one of the main factors in its production.

Dr. John T. Carpenter, of Pottsville, Pa., read a paper entitled

TETANY, AND A NEW THEORY OF ITS PATHOLOGY.

The author defined tetany as a nervous disorder accompanied by tetanic spasm of an intermittent character, which may extend from the extremities to the jaw, and be reproduced during its periods of intermission at will, by pressure on the tract of the affected nerve-trunk, or over the bloodvessels obstructing the circulation.

A historical review of the disease was given. Tetany was regarded, not as a special disease, but as a sequel of precedent phenomena only. The affection was regarded as the result of septic absorption. The diminution of cases of tetany, concident with the successful treatment and the prevention of septic poisoning, was regarded as an argument in favor of the connection between septicæmia and tetany. Cases illustrating this view were cited. The views previously held in regard to the pathology of tetany were discussed, and considered untenable.

DISCUSSION.

Dr. Francis P. Kinnicutt, of New York: I have seen but two cases of intermittent tetany, both occurring in patients with dilatation of the stomach. In one the dilatation was due to pyloric stricture, resulting from cancer; in the other there was non-malignant stricture. In both of these cases the conditions were favorable to absorption of poisonous matter.

Dr. F. T. Miles, of Baltimore, reported the case of a young woman, twenty-two years of age. She had suffered for six or eight years from dilatation of the stomach; had vomited acid matter, but never offensive; had several times had numbness of fingers and toes. She suffered her first attack of tetany twenty-four hours before her death. In this case the stomach had never been washed out.

Dr. A. Jacobi, of New York, had been struck with the stress laid by the readers upon sepsis as the cause of tetany. In one of the cases reported by Dr. Stewart, which he thought was due to absorption of putrid material, the stomach was twisted, and Dr. Jacobi suggested that the intermittent contracture were due to nervous influence, resulting from the twisting, rather than to absorption. He did not doubt that there were cases in which septic absorption produced such symptoms, but when we recall the fact that the contracture is temporary, we must conclude that the influences giving rise to that attack were also temporary. Many of these

cases are, I think, the result, of nervous irritation. In some of the cases reported, I should attribute the condition to anæmia.

Dr. James J. Putnam, of Boston, remarked that the reported cases of tetany showed such a variety of infectious sources, that it seemed hardly probable that they should act in such a similar manner, unless there was something else behind. Two or three things are to be considered: First, the influence of habit—the disease set up by a variety of causes may continue as a result of habit; second, the suggestion that in such cases of disordered action we have to deal with an over-sensitiveness of physiological arrangement is important. In these conditions we have the disordered manifestation of what is really a function, but one which is not ordinarily recognized, as it has no independent existence. It would seem that in the absence of further knowledge with regard to infection, and in the manner in which this infection, arising from various sources, may act, we should insist upon the possibilities of explanation which are presented to us by what we know of the physiology, and disordered physiology, of the nervous system, in attempting to explain conditions met with in this and similar diseases.

Dr. James Stewart, of Montreal, said in connection with the influence of peripheral irritation, that in the cases of dilatation of the stomach where tetany had caused death, the symptoms came on a few hours after the stomach had been washed out. This would point to irritation rather than decomposition as the active cause in this class of cases. There are many other cases where infection could not enter. —*Med. Record.*

Microscopy.

Hunting Yellow Fever Germs.

BY GEORGE M STERNBERG, M.D., SURGEON U. S. A

An address delivered by special invitation before the Quarantine Conference, at Montgomery, Ala., March 5, 1889.

[*Continued from the last issue.*]

The possibility remains that by some method of staining not hitherto employed, the specific infectious agent may yet be demonstrated in the tissues; but the fact that my culture experiments with material from the liver and kidney of ten cases failed to demonstrate any such specific microbe is opposed to this view. We may, of course, suppose that the yellow fever germ not only requires special methods, yet undiscovered, for its demonstration in the tissues, but that it will not grow in the culture media which I have employed in my researches. I would say in reply to this hypothesis that all known pathogenic micro-organisms may be demonstrated by the staining methods employed, and that, inasmuch as the yellow fever germ appears to find a favorable nidus in the filth beds external to the body, I have been inclined to believe that, like the bacillus of typhoid fever and cholera, it is not especially nice as to the character of the medium in which it may develop. However, this may be a mistaken idea, and I propose in my future researches to make use of various culture media not yet employed, and especially to make cultures from the tissues and the excreta in an atmosphere from which oxygen has been excluded; for it may be that, like the bacillus of malignant œdema and the bacillus of tetanus, the yellow fever microbe is anærobic.

While, then, I admit that by some special method of staining, or by a modification of the culture methods heretofore employed, the specific infectious agent we are in search of may yet be found in the tissues of yellow fever patients, I feel justified in saying that no such demonstration has yet been made. The negative results attending my researches in this direction have led me to turn my attention to the micro organisms present in the alimentary canal, for the possibility suggests itself that this may be after all the habitat of the deadly yellow fever microbe, which is capable of destroying life within two or three days, and that the phenomena of the disease are not directly due to its presence in the body, but result from the absorption of a poisonous ptomaine produced by it, as appears to be the case in cholera.

The famous English hygienist, Parkes, from the consideration of evidence relating to the prevalence of yellow fever during series of years among English troops stationed in Jamaica and elsewhere within the "yellow fever zone," in connection with the sanitary condition of their barracks, arrived at the conclusion that yellow fever is a "fecal disease," and there are many facts relating to the origin and extension of epidemics which seem to support this view—

that is, the belief that the germ finds a proper nidus in fecal matter external to the body. If in yellow fever, as in cholera, the infectious agent is located in the alimentary canal of those who fall sick with the disease, we can readily understand how it is that new centres of infection are developed, when external conditions are favorable, in the localities where imported cases have occurred, or as a result of the introduction to such localities of fomites.

This view also accords with the demonstrated fact that yellow fever is not directly communicated by the sick to those in attendance upon them. Pathogenic germs which multiply in the intestine no more endanger those who are associated with the infected individual than the same microorganisms cultivated in a suitable medium in a test-tube endanger the bacteriologist who is engaged in their study.

The possibility that the infectious agent in yellow fever may have its habitat in the alimentary canal, occurred to me several years ago, and I determined, in advance of my visit to Havana last spring, to give special attention to a bacteriological study of the intestinal contents.

It is well known that the excreta of healthy persons contain a vast number of microörganisms of various species, and that while some of these appear to be constant, others are occasional, and, we may say, accidental tenants of the human intestine, being introduced, no doubt, with the ingesta, and especially in drinking water.

Notwithstanding the researches of Brieger, of Bienstock, of Escherich, of Vignal, and others, this bacterial flora of the healthy intestine is still imperfectly known. The attempt, therefore, to explore this field for the purpose of finding a specific microbe in any particular disease, is attended with very great difficulties, unless, as in cholera, this specific microbe occupies the field to the exclusion of the ordinary bacteria found in the intestinal contents. Koch found his "comma-bacillus" almost in pure cultures in the characteristic rice-water discharges of cholera patients, and other bacteriologists, following his methods, have had no difficulty in verifying the presence of the same microörganism in cases of cholera occurring in various parts of the world. On the other hand, extended comparative researches, including my own investigations made in Havana and in Decatur, show that the "comma-bacillus," or rather spirillum, is not found in the alvine discharges of healthy persons, or in other diseases than cholera. If in yellow fever, as in cholera, there was a microörganism in pure cultures, or in relatively great abundance, capable of growing in the culture media which are suitable for the development of a majority of the known pathogenic organisms, I ought to be able, to-night, to exhibit to you cultures and photo-micrographs of this microorganism. But my researches show that the microörganism which is by far the most abundant, and, so far as my investigations go, the only constant form found in the excreta of yellow fever cases, is the *bacterium coli commune* of Escherich, which is also the most constant and abundant form found in the excreta of healthy persons.

In Havana my cultures were made from material from the stomach and intestine of fatal cases obtained at time of making the autopsy. My researches did not show that any of the microörganisms encountered was constantly present, with the exception of the *bacterium coli commune*—my bacillus *a*. Having excluded this bacillus by comparative researches, there was nothing to point to any one of the microörganisms present in my cultures as the probable infectious agent I was in search of.

The bacillus of Dr. Paul Gibier I only encountered in three cases out of ten, and in these it was not present in very great abundance, compared with the colon-bacillus for example.

My time in Havana, limited by my orders, was too brief to enable me to make an exhaustive research. The epidemic in Florida and Alabama during the past summer gave me an opportunity to continue the investigation, and, at my request, I was directed to proceed to the infected district for this purpose. The presence of my friend, Dr. Jerome Cochran, State Health Officer at Decatur, decided me to locate my laboratory in that place, where I found abundant material for the researches I had in view. Having made a considerable number of autopsies in Havana, I determined while in Decatur to devote my attention especially to a bacteriological study of the alvine discharges collected during the different stages of the disease.

Evidently, if the infectious agent multiplies in the intestine, it should be found in the excreta during the earlier stages of the attack.

The cause must be present in advance of the development of the morbid phenomena which characterize the disease. But it is quite possible that during the later stages the etiological agent has perished, and, therefore, would not appear in cultures made from material obtained post-mortem.

While in Decatur, and after my return to Baltimore, I examined by bacteriological methods—Esmarch tubes—the excreta of thirty-nine cases of yellow fever, and for comparison of nine convalescents and of nineteen healthy individuals. A detailed account of the results reached will be given in my final report. As was to have been expected, I have encountered a variety of micro-organisms. Many of these I have isolated in pure cultures, and the biological and pathogenic characters of several have been carefully studied by cultivation in various media and by inoculation experiments in the lower animals. It would be premature for me to attempt to give the results of these researches, even if time permitted me to do so. But I may repeat what I said at the outset, that the germ of yellow fever has not yet been demonstrated. It is possible, however, that one or the other of the micro-organisms which I have isolated is the long-sought germ, although I have no satisfactory evidence upon which to base a claim that this is the case.

My attention has been especially directed to the liquefying organisms found in the excreta of the thirty-nine cases examined. In a majority of these cases the presence of liquefying bacilli was demonstrated; but liquefying colonies were not numerous as compared with the non-liquefying, among which the colon-bacillus of Escherich was by far the most abundant. In a series of Esmarch tubes, No. 1 would show numerous liquefying centers, usually within twenty-four hours; very often No. 2 would contain a few liquefying colonies, while, as a rule, No. 3, although containing numerous isolated colonies of the colon-bacillus, did not contain any liquefying colonies. Further, I found that several different liquefying organisms were present in different cases, or were associated in the same case. I shall presently show you cultures and photo-micrographs of these liquefying bacilli. The one most frequently present, my bacillus *a*, I have since found in cultures from another source, and am obliged to exclude it as the possible specific etiological agent of yellow fever. It has also been isolated by Dr. Booker, of Baltimore, from the discharges of one or more infants suffering from summer diarrhœa. The bacillus of Gibier I have only isolated from three cases, and in these it was not present in considerable numbers. I have made extensive experiments upon the lower animals, which show that this bacillus has interesting pathogenic properties, but give no special support to the view that it is the specific germ of yellow fever. I have never observed in my cultures the black pigment which, according to Gibier, is produced during the development of this bacillus, and am at a loss to understand this discrepancy to our observations.

So far as the pigment in black vomit is concerned, I have no doubt that it is of hæmic origin. I have never failed to demonstrate, by a microscopic examination, the abundant presence of red blood-corpuscles in the numerous specimens of black vomit which I have examined. The little black flocculi are, in fact, made up of agglomerated corpuscles which have lost their pigment and appear as pale disks, often more or less swollen and distorted; while the brownish pigment, which has been changed by the acid secretions of the stomach, remains in their vicinity in the form of granules or amorphous masses. The idea that there is something specific about this pigment, or that it is the secretion of a specific microbe, as has been maintained by Freire and Gibier, appears to be to me untenable. In the majority of the non-fatal cases of yellow fever and in a certain proportion of the fatal cases there is no passive hæmorrhage into the stomach, and consequently no black vomit; yet these cases must result from the action of the same etiological agent as those in which this symptom is present.

I have found by experiment that the bacillus of Gibier, the micro-coccus of Freire, and the tetragenus of Finlay, all grow after being exposed for an hour to a temperature of 15° C. (5° F.). Exposure outside of the laboratory in Baltimore for five days in the month of January failed also to destroy the vitality of these micro-organisms, although the temperature, during the greater part of the time at least, was below the freezing-point.

Having thus given you a brief account of the present status of the investigation in which I am engaged, I propose to devote the remainder of the time at my disposal to a practical demonstration of the methods of research employed, and to an exhibition upon the screen of the various micro-organisms to which I have referred.

Clinical Morphology Versus Bacteriology, With Some Therapeutic Deductions.

BY JOHN ASHBURTON CUTTER, M. B., B. SC., NEW YORK.

Read before the Mississippi Valley Medical Association, and Illustrated by lantern slides of Microphotographs, Sept. 11, 1889.

WHAT IS CLINICAL MORPHOLOGY?—Morphology is the science of form. Clinical morphology covers the form elements that the clinician sees in his daily work with his patients; the position in bed; the lines of the face; the attitude assumed in walking and sitting; all come under the term clinical morphology; but for our purpose to-day, we will consider morphology to be the description of the form elements found in the blood, the urine, the sputum, the skin, the feces and foods.

WHAT IS BACTERIOLOGY?—The science of bacteria. What are bacteria? Very small bodies which are hard to place. They have been classified under the heading of schizomycetes of the confervoid algæ. A good definition of algæ is, that they are plants that produce oxygen, and of fungi, that they produce carbonic acid gas. However, I do not care to go into this part of the subject, for there must yet be a great flood of light thrown on this matter. My aim to-day is to show you that bacteriology as a means of diagnosis and of course of therapeutics is very weak as compared with clinical morphology.

For over twenty years my father, Dr. Ephraim Cutter, has been laboring to bring the original investigations of Dr. J. H. Salisbury before the profession, his aim being to save them for its use. In one way this has been a mistake, for in writings, much has been said about the so-called Salisbury plans; however, he has good company in such a mistake, for medical nomenclature is filled up with this and that man's operation, and even anatomy and physiology have to have some one's name tacked on; nomenclature can better describe in some instances an operation or a function or a tissue by some man's name. But the profession of medicine does not stand on any one man's work; he may be a pioneer, but no good will be done unless others come in and corroborate what he is right in and show his mistakes. The word morphology was first used in publications over ten years ago in its relations to medicine by my father, though the clinical morphology of the blood, sputum, etc., had been employed for twenty years previous to that time.

To-day I wish to oppose bacteriology and clinical morphology and give you as good a demonstration as time will allow of what it has been my good fortune to see, trusting you will be patient with me when I say that I realize the kindness of men much older than I am in listening and witnessing my demonstration.

We proceed to the concrete side of our subject, and will consider briefly the much advertised infant's foods, asthma, rheumatism and tuberculosis.

INFANTS' FOODS.—It will go without saying that bacteriology has little field of work in infants' foods. Yet the opportunities offered for clinical morphological investigations are great and of much importance. Take for instance, "Imperial Granum;" the author of "The Clinical Morphologies" showed years ago that, though the claims of the manufacturers were that this preparation was "amorphous, a solid extract, the salvator of the human race," etc., it was decidedly morphological, containing starch grains, to say no more, and the Connecticut Agricultural Experiment Station has backed up the statement of the morphologist by chemical examinations which show that "Imperial Granum" is common flour.

Any physician who has an infant food sent him for examination should not rely wholly on the chemical examination made by reputable chemists and not at all on the statements of the proprietors; place the food under the microscope, study for gluten cells, starch cells, cellulose, the connective tissues of the various grains; see if it is an amphorous, homogeneous mass, or made up of decidedly morphological elements. A food may be a first-class one chemically, yet contain so much cellulose that it is unfit for the stomach. The paper published in 1882 in Gaillard's *Med. Jour.*, on "Cereal Foods," by E. Cutter, illustrated by many cuts of micrographical drawings, created much attention as being the first to enter a new field as to foods, to-wit: the morphological; chemistry and clinical morphology should go together.

The therapeutic deduction is: Feed the mothers during gestation and lactation on such food that they will have milk enough to nurse their children, summer and winter. Our plan is, two-thirds animal and one-third vegetable, with one meat and one vegetable at a meal. I confined a young woman in March with her second child. The mother weighed ninety-five pounds; the babe, ten. One-half hour after the delivery of the placenta, the mother ate a good meal of beefsteak and a small portion of bread. A few weeks ago I heard from her, that this second child, which she called the "meat-baby," had done much better than the first; that she had plenty of milk for it and was in good health. The mother and child reside in New York City.

MORPHOLOGY OF THE SPUTUM IN ASTHMA.

The following in quotations is from the work entitled, "The Clinical Morphologies," by Ephraim Cutter, M.D., LL.D.; published by the author, New York:

"Cholesterin; cystin; oxalate of lime; phosphate of lime; triple phosphates; uric acid and urates; calculi made up of the salts; contents of giant cells escaped outside of walls; crystals with two or more terminals; foreign substances inhaled; fusiform crystals; gravel crystalline, gravel granular, gravel massive.

"Mucous corpuscles distended with albuminoids; with crystalline and other bodies; with cystin; with giant cells; with melanotic matters; with oxalate of lime; with triple phosphates; with uric acid and urates.

"Other crystals whose names have not been made out. Spirilina splendens, Salisbury, 1865."

The therapeutical indication from this morphology in asthma is to feed the cases so that there will be the minimum of fermentation and thus stop the paralyzing action of the carbonic acid, etc., on the eliminative glands; give tonic and liquefying medicines, and if the case is watched closely, and will follow the orders to the letter, a cure may be expected in time. It hardly needs to be said that bacteriology is far behind clinical morphology because it can only treat of bacteria, yet clinical morphology is able to show physical causes of the asthma and hay fever.

THE MORPHOLOGY OF THE BLOOD.

MODE OF STUDY.—"It is necessary to have the patient, the light, the means of withdrawal of the blood—a lancet, spring lancet, the sacrificator of the writer, (E. Cutter) or a needle, which is not the best thing—all together.

"There is no such thing as taking the blood home to examine. The changes are so rapid that most of the important ones disappear in ten minutes' time. Still, after these are gone, many valuable points remain to be looked for.

"KIND OF BLOOD.—The capillary—not the venous or arterial.

"SITE OF WITHDRAWAL.—On the radial or ulnar side of the forearm near the wrist. The skin should be clean and free from soap. If dirty, wash with soapsuds or ammonia water. (It is well that the beginners should study the skin surface, dirt and epithelium, before looking at the blood.) Take the patient's forearm in the hand, and make the skin tense in the interval between thumb and forefinger. A quick puncture is then made, about one-eighth of an inch deep. The tension of the grip will squeeze out a drop of blood. The size of the drop should bear direct relation to the size of the cover. Very much depends on handling the drop rightly. When the drop evenly diffuses itself, it is presumed that the film is about uniform in thickness, so that one can judge somewhat as to the comparative number of corpuscles in each specimen. The process of transferring the blood should take only a few seconds of time; a fraction would be sufficient.

"MORPHOLOGY OF THE BLOOD IN HEALTH.

"COLOR.—Bright, fresh, clear, strong.

"CLOTTING.—Rapid and firm.

"RED CORPUSCLES.—Arrange themselves in nummulations, or are scattered evenly over the fields. Normal in size. Non-adhesive. Central depression well marked on both sides; periphery well rounded, clean cut. Hold coloring matter firmly. Pass readily to and fro the febrin filaments; appear fresh and fair.

"WHITE CORPUSCLES NORMAL IN SIZE.—Not enlarged by internal collections of foreign bodies. Amoeboid movements strong or not. Proportion, one to three hundred of red corpuscles. Consistence good. Not sticky. Color a clean white. Freely moving at will.

"SERUM.—Clear and free at sight from any form. After five minutes, most delicate, semi-transparent fibrin filaments appear, forming a very light network in the field, which offers no obstacle to the passage of the corpuscles.

"There should be no spores nor vegetation in healthy serum, though they may be found by very minute examination, or by letting the blood stand for several days in closely stopped phials at a temperature of from 60–75° F. This is not saying that spores and filaments can not be found in blood of persons calling themselves healthy—for some diseases exist in a latent condition, like rheumatism, syphilis, cystinæmia and consumption. I have met with people who, on finding vegetations in their blood, have decided not to accept the evidence because they deemed themselves healthy. Again, it is difficult to find a perfectly healthy person in the community; this was made public during the 'late unpleasantness,' when drafts were made for soldiers. The blood evidence must be taken in connection with that of other physical signs.

"MORPHOLOGY OF THE BLOOD IN RHEUMATISM.

"Rheumatism may be called the gravel of the blood.

"Color varies from that of health to the paleness of anæmia.

"Consistency and rapidity of clotting increased.

"Red corpuscles. Color usually impaired, not always.

"Adhesive, sticky, often drawn out into elongated lozenge-shaped bodies with pointed ends, and sometimes filaments joining with one or more of their fellows.

"Clot in winrows, ridges and huddled masses; sometimes quite formless. This is caused by the massive febrin filaments holding them fast, as it were, in their firm meshes. The same thing is seen in consumptive blood, but to a less degree.

"White corpuscles usually enlarged; adhesive, sticking to each other and to the red corpuscles, and matters found in the serum. Indeed, it seems to be the office of the white corpuscles so far as possible to swallow and envelop any foreign substance that may find its way into the blood. Thus we find crystalline matters in the white blood-corpuscles in rheumatism, though not always.

"They undergo amoeboid movements as in healthy blood—they have independent locomotion. Disease does not seem to impair their automatic movements.

"Often they are increased in number. If there is fatty degeneration going on, they will be found to contain fat in globules.

"The serum.

"Fibrin filaments in massive, strong and sticky threads, in abundance—in meshes, which are finer than in health, visible plainly—strong, and hold the red corpuscles like prisoners—in skeins, like tangled skeins of silk—in masses forming thrombi, which, when fastened, form emboli.

"These thrombi are apt to involve and embrace white and red corpuscles and crystalline bodies to be named below. Sometimes the fibrin filaments are found in large round strings, curled up fancifully by the motion of the blood stream, and looking like the mycelial filaments of vegetations, from which they can be distinguished by the absence of entire cylindrical outline—ragged broken edges here and there and dichotomcus and polychotomous divisions of the trunk, differing from vegetations of syphilis for example. It is the presence of these fibrin filaments that makes the blood ropy, adhesive and sticky. They have the tendency to block up the blood stream, and besides to be locally deposited in the tissues specially when the circulation is sluggish, as near the extremities and the joints.

"CRYSTALLINE BODIES, OR GRAVEL OF THE BLOOD.—These are numerous and readily recognized; some of them are as follows:

"1. Uric acid and urates of soda.

"2. Phosphates—especially the triple phosphates of lime and soda.

"3. Oxalate of lime.

"4. Cystine. This quite common and easily detected.

"5. Carbonate of lime, rare.

"6. Stelline and stellurine. These occur mostly in granular form in the serum, but in old cases, where the system is saturated, they are crystalline.

"7. Black, brown, aniline blue, bronze, orange, red and yellow pigments in the form of flakes or small masses are common in rheumatic blood, and may be termed gravelly matters that should have been eliminated by the kidneys or bowels or skin.

"LATENT CONDITION OF THE CHARACTERISTICS OF RHEUMATIC BLOOD.—The morphology of rheumatic blood exists in a latent condition in persons apparently well; but when they are exposed to cold, the blood-vessels contract, catch and detain these abnormal elements, and we have a stasis of the blood which may be active or passive, and manifests itself in heat, fever, pain, swelling, inflammation or passive congestion, effusion, etc., and which make up what is known as an 'attack of rheumatism.' The fever may result from the effects of nature to get rid of the intruders, just as a householder will become hot in expelling from his premises a thief whom it is difficult to remove. Or, to use other simili, the attack of rheumatism is like the explosion of a gun. The charge in the gun is the morphology of rheu matic blood, and the cold is the pulling of the trigger. The charge may be latent in the gun for years, but is there with its potential energy ready to become actual from an exciting cause.

"Fibræmia is where the fibrin is in excess in filaments, skeins, curled massive fibers like strings—thrombi and emboli. These are in a more exaggerated condition and form than in consumption or rheumatism, and are not necessarily associated with the crystalline matters or gravel. Sometimes the fibers look like a scalp that has been taken from the head of a woman with long tresses of hair.

"Thrombosis is where masses of fibrin accrete and consolidate together, including or not the red corpuscles, white corpuscles, crystalline and pigmentary bodies, spores and mycelial filaments or vegetations, one or all.

"Embolism is where a thrombus has been caught or engaged in a blood-vessel and acts as a plug disturbing the circulation.

"Pre-Embolic State.—As thrombi precede emboli, so they can be detected in the blood before the embolism, simply by the morphology of the blood. In this way sudden deaths from embolism, especially in the puerperal state, can be averted."

Here again we have a subject which bacteriology can not touch, as the morphology of the blood in rheumatism shows the causes of the inflammation, pain and deposits to be purely physical and chemical.

Dr. Asa F. Pattee, of Boston, told us at the last meeting of the American Medical Association that he had had gout for years, and accepting the popular idea, he chewed beef and ate vegetable food mainly. Finally he changed his ideas and ate beef largely, with the result that his swollen joints are decreasing in size. I see that the English writers are beginning to think that beef does not have so much to do with the cause of gout. Indeed, beef has had many sins that other foods should have borne the complaint of, laid at its door. Stop the Englishman from eating his puddings, pastry and sweets, and feed him on beef rightly prepared, and I think he will have less gout. The morphology of the blood in these old cases of gout is very interesting and beautiful. One case I examined several years ago, had a most remarkable display of crystals of cystine.

A lady has recently come under treatment who had been for three summers at one of the large sanitariums of the

West, which is very extensively advertised. All this time no improvement was made in her case; they told her that rheumatic gout was a fiend; was incurable; that milk was a perfect food (though in this case it had clogged up her liver so that it is hard work to get it to running smoothly); that beef was nasty and not fit for man to eat, etc. Her blood was ropy and sticky, molasses like; crystals of cystine and uric acid were present.

In three weeks' time, a finger that she had not been able for three years to flex to the palm, will now touch it.

The case is improving very fast; rarely bloats, whereas she had to buy charcoal continually while in the West, for the gas.

To treat rheumatism, one must be patient; sometimes the cases have to go on very rigid diet; nothing but the beef separated from its fibrin, and the resultant pulp broiled. I wish to say here, that we never prescribe beef raw, never did, and never will.

Each case must be studied for itself. This case in question can eat a little bread with her meat, but potato will immediately bloat her. It takes time to cure these cases and to get their stomachs, livers, bowels and kidneys working rightly. Put the nutrition on a healthy basis, get the blood right, and then wait for old Dame Nature to do her work. —*Weekly Medical Bulletin.*

Gleanings.

Hemorrhage from Salicylic Acid.—As long ago as 1886 and 1887, Dr. Lauriston E. Shaw, Medical Register to Guy's Hospital, recorded cases to show the influence of the salicylate of sodium in the production of hemorrhage. During the treatment epileptiform convulsions came on and lasted fifteen minutes, with arrest of respiration. Under artificial respiration the woman rallied momentarily, but the convulsions reappeared, and five minutes later death occurred. In the case of Montali 1½ grammes of the hydrochlorate of cocaine were given by the mouth, through mistake, to a patient suffering from phthisis. Fifteen minutes afterward wandering delirium appeared, with ineffectual vomiting, marked fall of temperature, pale face, dilated pupils; cyanosis soon become apparent, and the pulse grew imperceptible. Unconsciousness developed, followed in a very short time by death. At the post-mortem, intense congestion of the brain and spinal cord with their membranes was found; the brain-surface being covered with a thin layer of blood and the subarachnoid space full of serum. On section of the brain-substance minute bleeding points everywhere appeared, giving rise to confluent drops which spread over the whole cut surface. The heart was firmly contracted; the spleen, liver, stomach, and small intestine were excessively congested; the kidneys normal. Another fatal case of cocaine poisoning was recently the subject of inquest at the University College Hospital, London. A 20-grain solution in a glass of water had been ordered by the house surgeon without direction, but with the word "statim" written upon it, a customary indication that the solution is to be dispensed immediately; the apothecary, misunderstanding this, gave twenty grains of cocaine in solution in a measure-glass to the nurse as a draught for the patient. The initial symptoms are not known, for it was not until nearly an hour had elapsed that the nurse, hearing the patient making some unusual noise, had her attention drawn to him. At this time there was coma, out of which the patient could be partially aroused with convulsive movements of the limbs. At the autopsy the brain was found intensely congested, with serous effusion beneath the arachnoid. It was also noted that there was extensive tubercular disease of the kidney and bladder, as well as in the lungs.—*Ther. Gazette.*

ETHER-DRINKING.—The consumption of ether for drinking purposes in portions of the North of Ireland is considerable, and all efforts to stop it appear unavailing. At a recent meeting of the Cookstown Young Men's Christian and Literary Association the following resolution bearing on the subject was unanimously adopted: "That, having heard that the Government intended dealing with the question of the consumption of intoxicating liquors in Ireland during the coming session, and seeing that ether-drinking is so prevalent in the district about this town, and is of such injurious effect, we respectfully beg that in any Bill dealing with the liquor question in Ireland a clause may be inserted placing the houses in which ether is sold at present under similar restrictions as licensed spirit dealers' houses, or else restrict the sale of ether to houses licensed at present."—*Brit. Med. Jour.*

THE ALLEGED ANÆSTHETIC EFFECT OF ARTIFICIAL LOCAL ANÆMIA.—The increased anæsthetic powers of such alkaloids as cocaine and erythrophlœine, when injected into a part that has been rendered bloodless, by means of Esmarch's bandage or some other contrivance to accomplish the same end, have been said by some to be more apparent than real, the anæsthesia being alleged to be really due to the anæmia alone. To settle the point, Karewski, of Berlin, ("Therapeutische Monatshefte;" "Deutsche Medizinal-Zeitung") has tested the sensibility of parts that have simply been emptied of their blood, without being subjected to the action of any drug. He finds that certain paræsthesiæ are caused, but that the sensibility to heat and cold is unimpaired, that the tactile perception is sufficient to enable the subject to distinguish the contact of a blunt object from that of a pointed one, and that the sensitiveness to painful impressions, far from being suspended, is rather intensified. Anæmia, then, is not an anæsthetic.—*Ex.*

VERY HOT COMPRESSES IN SURGICAL PRACTICE.—Dr. I. I. Nasiloff, in the Vrach, gives an account of several cases of inflammation of the lymphatic glands which he treated with marked success by means of very hot compresses. The compress consisted of a fourfold piece of linen, rather larger than the gland. It was dipped into water at a temperature nearly or quite equal to 212° F., wrung out, and applied quickly over the glands, its own temperature being then from 140° to 165° F. These applications were made morning and evening, the compress being allowed to remain on, covered over with cotton wool, for about 15 minutes. The applications produced severe pain, but this did not last long, though sometimes not only redness but a blister was caused. The treatment was continued for about a fortnight. It was found that it very soon began to promote absorption. It was noticed that the earlier the treatment was adopted the more effective it showed itself.—*Med. Age.*

TREATMENT OF HERPETIC CONJUCTIVITIS.—In cases of herpetic conjunctivitis occurring in children, the following instillation will, according to Dr. Saint-Germain, in *L'Union Médicale*, June 13th, be found most valuable. Under its use the pain quickly subsides.

℞.—Borate of soda	grs. ijss.
Sydenham's laudanum	gtts. v.
Distilled water	f ℥j.—M.

Sozoiodolates in Diseases of the Throat and Nose.—The Swiss correspondent of the *British Medical Journal*, July 6th, states the experiences of Professor Hermann Suchannek, of Zurich, with the sozoiodolates of potassium, sodium, zinc, and mercury in nasal and laryngeal disease. His observations agree with those of Fritzsche and Seifert in being very favorable to the new drugs; in particular, the writer found that sozoiodolate of potassium, in the form of powder, mixed with talc (1 to 1 or 2), is a valuable nasal insufflation in cases of chronic muco-purulent, purulent, and serous rhinitis with profuse discharge, while the sodic salt is especially useful in tuberculous or lupoid affections of the nose, fauces, and larynx. Sozoiodolate of zinc, mixed with talc in the proportion of 1 to from 12.5 to 7.5, is said to be an active stimulant of the nasal glands, and hence proves of great service in chronic hypertrophic rhinitis associated with scanty secretion and swelling of the lower turbinated bodies, as well as in cases of senile atrophy of the nasal mucous membrane, in scrofulous rhinitis, and in genuine atrophic and syphilitic ozœna. One or two applications of the zinc compound, after the local use of cocaine, often cut short attacks of acute coryza. Further, the zinc salt considerably diminishes the dryness and other unpleasant subjective symptoms in patients suffering from pharyngitis sicca. Sozoiodolate of mercury, mixed with talc in the proportion of 1 to 20 or 10, and applied by means of a brush or cotton-wool, may be recommended in syphilitic ulcers of the naso-pharynx.

The Prevention of Shock by Atropine.—The President also recommended the hypodermatic injection of from 1–75 to 1–100 of a grain of atropine previous to giving ether for an operation. In the second of the two foregoing cases the woman had been etherized, so as to admit of a brief examination a few days before the operation, and had come out of the anæsthetic in a deplorable condition, from which she had not rallied for several hours. For considerable periods the pulse had been very weak and even imperceptible. On the contrary, atropine having been given before the ether on the day of the operation, she was taken from the table with a pulse as good as before the operation began. The subsequent symptoms of shock had been very slight. He had used atropine for this purpose for five or six years, having first observed its control of the inhibitory action on the heart in certain physiological experiments. How much influence it exerted it was not always easy to determine, but he believed it to be of great value.—*Dr. L. A. Stimsom, in New York Surgical Society.*

CACTUS GRANDIFLORUS IN CARDIAC AFFECTIONS.—According to the *Rev. de Thér. Méd. Chir.* of June 15th, Dr. Gregory has used the cactus grandiflorus in functional valvular disturbances with great success, and considers it of far greater value than digitalis in such cases. Further, he has also found it most efficacious in cardiac innervation, in strengthening weak, irregular, and tumultuous hearts, especially in cases where the patient is nervously depressed.

Gregory claims that it is an invaluable cardiac tonic, its continued use giving tone and strength to the organ. It has no injurious effect upon the digestive system, and even when used for a long period was well borne by the most delicate stomachs.

A REMARKABLE LEGAL DECISION IS REPORTED IN THE DAILY PRESS FROM ONE OF THE COURTS OF OHIO:—In sustaining the demurrer of the Repository Printing Company and ex-Judge Lahm in the damage suits brought against them for $40,000 by Paul Field and William Volkman, Common Pleas Judge Raley decided that "it is not libel for a newspaper to publish a man before the world as a bastard." In the article for which suit was brought the plaintiff was stamped as of illegitimate birth. Judge Raley held, as reported, that "libel was that which would bring one into ridicule, contempt, or hatred; that which would tend to degrade one against whom it was directed. A number of his honor's associates on the bench had been born out of wedlock, but they stood high in social and legal circles. If anything, their being of illegitimate birth elevated them. —*Boston Med. and Surg. Jour.*

TO ABORT A FELON.—Dr. Gaucher, says the *Therapeutic Analyst*, in writing on the abortive treatment of felon, states that to effect this object it is sufficient to moisten slightly the painful part with a little water, and to pass over this surface a stick of nitrate of silver. In a few hours after the skin becomes black, all pain disappears and the inflammation is arrested. No dressing is required and the black color disappears in six days.

SOZOIODOLATES IN DISEASES OF THE THROAT AND NOSE.—The Swiss correspondent of the ***British Medical Journal***, July 6th, states the experiences of Professor Hermann Suchannek, of Zurich, with the sozoiodolates of potassium, sodium, zinc, and mercury in nasal and laryngeal disease. His observations agree with those of Fritzsche and Seifert in being very favorable to the new drugs; in particular, the writer found that sozoiodolate of potassium, in the form of powder, mixed with talc (1 to 1 or 2), is a valuable nasal insufflation in cases of chronic muco-purulent, purulent, and serous rhinitis with profuse discharge, while the sodic salt is especially useful in tuberculous or lupoid affections of the nose, fauces, and larynx. Sozoiodolate of zinc, mixed with talc in the proportion of 1 to from 12.5 to 7.5, is said to be an active stimulant of the nasal glands, and hence proves of great service in chronic hypertrophic rhinitis associated with scanty secretion and swelling of the lower turbinated bodies, as well as in cases of senile atrophy of the nasal mucous membrane, in scrofulous rhinitis, and in genuine atrophic and syphilitic ozœna. One or two applications of the zinc compound, after the local use of cocaine, often cut short attacks of acute coryza. Further, the zinc salt considerably diminishes the dryness and other unpleasant subjective symptoms in patients suffering from pharyngitis sicca. Sozoiodolate of mercury, mixed with talc in the proportion of 1 to 20 or 10, and applied by means of a brush or cotton-wool, may be recommended in syphilitic ulcers of the naso-pharynx.

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Effects of Prolonged Chloroform Anæsthesia.—Some observations made about two years ago by Dr. Ungar pointed to fatty degeneration of the heart and liver as the cause of death after repeated prolonged administration of chloroform. Further experiments on dogs have recently been made by Dr. Strassman, which appear to confirm this view. Dr. Strassman found that the first organ to be affected was the liver, then the heart, and after that other viscera. The nature of the morbid change was not a fatty degeneration, but fatty infiltration. The actual cause of death in fatal cases appeared to be the cardiac affection, as in all such a very marked degree of change was found in the heart. In non-fatal cases the morbid change was found to have disappeared in a few weeks' time. When morphia was given previously to the chloroform, less of the latter was required, and consequently the changes produced were not so considerable as when the ordinary amount was given. Animals suffering from hunger, loss of blood, etc., were especially predisposed to the morbid changes due to chloroform.—*Lancet.*

Disinfection of the Hands.—The Paris correspondent of the *British Medical Journal* of July 6th, writes that Drs. Roux and Reynes have tried the method recommended by Dr. Fürbringer, of Berlin, for disinfecting the subungual portions of the fingers with alcohol at 80° C. After thoroughly washing and brushing their hands and nails with hot soap and water, then with carbolic acid at ten per 1,000, they scraped the subungual portions with a short, rough, thin wire, previously sterilized. The wire was then placed in gelatine, or in agar-agar. Forty-eight hours afterward the cultivations became liquefied, owing to the numerous colonies they contained. This experiment was repeated twelve times, with similar results. The authors then scraped their nails by a mechanical dry process, and after washing and brushing their hands in hot soap and water, they washed and brushed them in alcohol at 80°C. After the alcohol evaporated they again washed and brushed their hands in an antiseptic solution. Out of forty experiments, aseptic results were obtained thirty-three times. Out of eight clinical attempts, these results were obtained four times. The authors conclude that the method is superior to that ordinarily employed, and may be applied with advantage in abdominal surgery and gynecology.

TREATMENT OF CHRONIC CYSTITIS.—Chronic cystitis has been treated, with great success, by Dr. V. Mosetig-Moorhof, of Vienna, with iodoform injections. His method of treatment is as follows:

The bladder having been previously irrigated with moderately hot water, an injection of the following emulsion should be made.

℞.—Iodoform	50 parts.
Glycerine	40 "
Distilled water	10 "
Tragacanth gum	¼ part.—M.

Sig.—One tablespoonful to a pint of lukewarm water, well stirred, for one injection. Injections should be made every third day.—*Wiener Med. Presse*, No. 29, 1889.

FIFTY SEVEN OPERATIONS ON PERIPHERAL NERVES.—Dr. Maurice H. Richardson, of Boston, reported a series of fifty-seven operations on peripheral nerves, taken from the records of the Massachusetts General Hospital. Of this number twenty-eight had been performed by himself. Thirty-five cases of neurectomy for neuralgia were reported very briefly. Most of these cases were affections of the trifacial nerve. The earliest cases of trifacial neuralgia were treated by section of the motor nerve. This was probably done with the idea that the pain was caused by facial spasm. These operations were unsuccessful. In the operations of later years is to be seen a constantly increasing thoroughness and severity. In the beginning there was only a subcutaneous section of the nerve, but now as much of the nerve-trunk as possible is excised. In obstinate cases the nerve is divided at the foramen of exit from the skull. The result of these operations has been an almost invariable temporary success. The period of immunity from pain lasts from a few weeks to several years, while in some permanent cure has followed. The length of the period of relief bears some relation to the amount of nerve removed.

Several cases of buccal neuralgia were treated after the method of Zuckerkandi—by dividing the main trunk of the nerve as it emerges from the space between the coronoid process of the lower jaw and the insertion of the temporal muscle. Several methods of operating on the inferior dental nerve were described; the most important of these was the total evulsion of the nerve by trephining over both dental and mental foramina, SURGICAL INTERFERENCE IN FRACTURES OF THE SPINE.—In fractures of cervical vertebræ, there is indicated immediate reduction of any displacement by extension and manipulation under an anæsthetic, followed by continuous extension and immobilization. In all fractures of the lumbar or dorsal spine, involving the bodies or the arches, reduction is effected, with or without the plaster-jacket, by the hammock suspension, preceded, if there is evident displacement, by extension under an anæsthetic. When symptoms indicating injury of the cord persist without improvement, resection is indicated. Immediate operation would be indicated when there is marked depression of the arches with symptoms of paralysis. Long continuance of the symptoms is not in itself a contra-indication to operation. We have, in suspension, the means of alleviating some of the sequelæ of fracture of the spine.

Book Notices.

A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY. By W. S. Playfair, M.D., LL.D., F. R. C. P., Physician Accoucheur to H. I. and R. H. the Duchess of Edinburgh; Professor of Obstetric Medicine in King's College; Physician for the Diseases of Women and Children to King's College Hospital; Late President of the Obstetrical Society of London, etc. Fifth American from the Seventh English Edition. With Notes and Additions, by Robert P. Harris, M.D. With Five Plates and Two Hundred and Seven Illustrations. 8vo. Pp. 167. Leather. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, $5.00.

The American editor states that four years have elapsed since the last American, the fourth American, edition was issued; and this period has worked a revolution in the results attained in several forms of obstetric surgery. Notably is this the case in the Porro-Cæsarian operation; the conservative Cæsarian operation; and the exsective method of treating extra-uterine pregnancy where the fœtus is alive and of viable development.

The author, in the preface to the seventh English edition, has the following to say in regard to the work: "The whole has been carefully revised, some portions have been rewritten, and several new illustrations have been added.

The chief change, however, is that the obstetric nomenclature decided on by a committee appointed at the International Medical Congress, held at Washington in 1887, has been introduced. Presided over by Prof. Simpson, of Edinburgh, there can be little doubt that its recommendation will eventually be adopted. As so authoritative a commits tee has pronounced in favor of letters in describing the various cranial positions, there is hope of the same letters being employed by writers in various countries. The author, therefore, has thought it advisable to introduce them in brackets, so as to give his readers the opportunity of familiarizing themselves with their use.

As midwifery is generally considered merely as an art, the principles of which, whatever they are, being mechanical, it is the impression of many minds that there can be but little progress made in the knowledge of it—that having collected the teachings of years of experience, and decided upon the most approved manipulations, further advance would necessarily be slow. But such, however, does not seem to be the fact, if what Dr. Playfair says is true. In speaking of the *science* of obstetrics, he states that "those who have studied the progress of midwifery know that *there is no department of medicine in which more has been done of late years*, and none in which modern views of practice differ more widely from those prevalent only a short time ago." But in accepting these statements of Dr. Playfair, midwifery must be held to be something more than a mere knowledge of mechanical processes and mechanical manipulations. It was taught us in the days of our studentship that the key to obstetrics was a knowledge of the various stages of labor; that he who understands them well could consider himself a thorough obstetrician. But this must be regarded as a fallacy, in the opinion of Dr. Playfair. Dr. P. evidently considers that Obstetrics involves not merely a familiarity with the diameters and circumferences of the various straits, and the diameters and circumferences of the fœtal head, and the relations which they bear to one another, and the modifications of which they are susceptible, but he is also of the opinion that the learned obstetrician should be conversant with all that is known of the mysteries of conception, pregnancy and its stages—in other words, of the whole progress of generation and all that is involved in it. He should also be competent to treat the diseases of pregnancy, and those affections which frequently follow upon it.

The many editions through which the work of Dr. Playfair has passed—seven in England and four in this country—shows how acceptably it has been received in both countries. When it comes to be examined it is not surprising that it has met with a preference over that of many other valuable works which had the advantage of occupying the field before it. It is found to be a text-book peculiarly adapted to the wants of students—containing all that they need in the way of details—at least, all to which they can give attention while actively engaged in studying other branches of medicine. The demonstrations are clear and to the point, imparting a satisfactory understanding of whatever is discussed. A work like it will not soon be superseded by others. The present edition, we are sure, having been brought fully abreast of the most recent advances in obstetrics, while maintaining all of the desirable features of previous editions, will make the work still more acceptable to medical students and physicians, and largely increase the demand for it.

CHEMISTRY: General, Medical and Pharmaceutical, Including the Chemistry of the United States Pharmacopeia. A Manual of the General Principles of the Science, and their Applications in Medicine and Pharmacy. By John Attfield, F. R. S., M. A., Ph. D., of the University of Tubingen; F. I. C.; F. C. S.; Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain; Honorary Member of Pharmaceutical Societies of Great Britain, St. Petersburg, Austria, Denmark, East Flanders, Australasia, New South Wales, American Pharmaceutical Association, Colleges of Pharmacy of New York, Philadelphia, Massachusetts, Chicago, Ontario, etc. Twelfth edition. 8vo Pp. 770. Leather. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, $3.25.

Attfield's Chemistry needs no introduction to medical men and scientific men generally. It is a text-book, and has been almost since its first publication, in all the medical colleges of this country, and in nearly all the colleges, universities and scientific institutions. In fact, we do not know of an educational work so widely known and extensively used. Within twenty-two years a demand has arisen for *twelve large editions* of this Manual. The first edition was published in 1867, which was designed only as a hand-book of practical chemistry; but the notes and remarks respecting the experiments were found so useful by students that the work in the second edition was rendered more fairly complete.

While the book is a work on general chemistry—a systematic exponent of the general truths of the science, yet it is written mainly for the pupils, assistants and principals engaged in medicine and pharmacy. It is essentially, as the author states, a manual of applied chemistry, but it is first of all a manual of chemistry. It differs in three particulars from other text-books upon chemistry: 1. In the exclusion of matter relating to compounds which, at present, are only of interest to the scientific chemist. 2. In containing more or less of the chemistry of every substance recognized officially or in general practice as a remedial agent. 3. In the paragraphs being so cast that the volume may be used as a guide in studying the science experimentally.

The work considers in detail the relations of the elementary and compound radicals, synthetical and analytical bearings being pointed out, and attention frequently directed to connecting or underlying truths or general principles. The chemistry of substances met with in vegetables and animals, or similar substances artificially produced (the so-called Organic Chemistry), is next considered. Practical toxicology, and the chemical as well as microscopical characters of morbid urine, urinary sediments, and calculi are then given. The concluding sections form a laboratory guide to the chemical and physical study of quantitative analysis. In the Appendix is a long table of tests for impurities in medicinal preparations; also a short one of the saturating powers of acids and alkalies, designed for use in prescribing and dispensing.

The twelfth edition contains such alterations and additions as seemed necessary for the demonstration of the latest developments of chemical principles and the latest applications of chemistry in pharmacy. The work now includes the whole of the chemistry of the United States Pharmacopeia and nearly all of the British and Indian Pharmacopeias. But the chief new feature is the section on Organic Chemistry, an elaboration of that written for the last British edition early in 1885.

As further evidence of the great merit of the work, we will mention that at the First International Pharmaceutical Exhibition held in Vienna in August, 1883, for this Manual the author was awarded a Gold Medal.

An Introduction to Pathology and Morbid Anatomy. By T. Henry Green, M.D., Physician to Charing Cross Hospital, and to the Hospital for Consumption and Diseases of the Chest, Brompton; Late Lecturer on Pathology and Morbid Anatomy at Charing Cross Hospital Medical School, etc. Sixth American from the Seventh English Edition. Revised and Enlarged by Stanley Boyd, M. B., B. S., Lond., F. R. C. S., Eng., Senior Assistant-Surgeon to Charing Cross Hospital, and Surgeon to the Paddington Green Hospital for Children, etc. Illustrated by One Hundred and Sixty-seven Fine Engravings 8vo. Pp. 539. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, $2.75.

We have reviewed several of the previous editions of this work, which has reached the sixth American and the seventh English edition.

The seventh English edition, from which the sixth American edition has been reprinted, was edited, by the request of Dr. Green, by Mr. Stanley Boyd. Mr. Boyd thus speaks of his work in preparing it: "I have subjected it throughout to careful revision, and have, in many places, altered or rewritten portions, even of those chapters which I had revised or written for the sixth edition. Thus I have recast the chapter on Fatty Degeneration, made considerable changes in the accounts of other degenerative processes, rewritten the etiology of Inflammation, made numerous additions to the accounts of the Infective Granulomata, inserted a section upon Rhinoscleroma, and rewritten much of the chapter on the vegetable parasites. So far as it goes, I trust that the information given will be found accurate and up to date." Several new wood-cuts have been prepared for this edition, and a still larger number of blocks.

The Pathology and Morbid Anatomy of Dr. Green is too well known by members of the medical profession to need any commendation. There is scarcely an intelligent physician anywhere that has not the work in his library, for it is almost an essential. In fact, it is better adapted to the wants of general practitioners than any work of the kind with which we are acquainted. The works of German authors upon pathology, which have been translated into English, are too abstruse for the physician daily employed in the practice of his profession. He has no time to read learned discussions and compare the opinions of different investigators, engaging himself in investigations. He is willing to be satisfied with such facts as have been demonstrated, and wait for the demonstration of the truth or falsity of those that are under discussion. Dr. Green's work, therefore, precisely meets his wishes—he can study in it morbid anatomy as it has been developed by research, and learn all the processes of morbific action. The cuts in the work exhibit the microscopic appearances of pathological structures just as they are seen through the microscope.

The fact that it is so generally employed as a text-book by students in attendance upon medical colleges is evidence that we have not spoken too much in its praise. Now that the work has been revised, and exhibits fully the advance that has been made in pathology up to the present time, will render it more than ever acceptable to students and physicians.

Editorial.

LIFE INSURANCE AND ACCIDENT INSURANCE.—Among other institutions for the welfare of men developed by the progress of the nineteenth century are Life Insurance Companies and Accident Insurance Companies. The benefits which each of these have bestowed upon those who have sought their advantages are immense. But which has done the most good it would be invidious for us to discuss; for each has done enough to be regarded as a great benefactor. Both of them are the results of the advanced civilization of the age, for previous to the present progress they would not have been tolerated, even if they had been suggested, for the suggestion would have impinged against the religious superstitions of every one.

Though it is known that Accident Insurance Companies pay indemnities in case of death, yet this fact seems to be largely lost sight of in consequence of the accident feature of their policies, which causes most persons to be of the opinion that their principal business is the payment of indemnities for injuries following upon accidents. It will be a surprise when we state that they pay out more money on account of loss of life than they do for injuries resulting from accidents.

But who are the beneficiaries under the life insurance clauses of the policies of Accident Insurance Companies? Are they mechanics, laborers, railroad employes, travelers, postal clerks, drummers of mercantile houses? Very many are of those classes, but more are not. Among them will be found physicians, attorneys, judges of courts, ministers, merchants, bank men, etc. A few days ago a terrible accident occurred on the Mt. Auburn Incline Plane of Cincinnati, by which five or six persons lost their lives. There was not a laborer or mechanic or traveling agent among them. One was an attorney, an ex-judge, of high position; another was a professor in one of our intermediate schools; another was a merchant; several were ladies. Not one of them was engaged in a pursuit that was attended with danger to life,, yet the end of the route of the car to the living persons upon it proved to be eternity. On the very next morning after this terrible accident, which threw the whole city into excitement, one of the proprietors of a mercantile firm was struck by a descending elevator and was instantly killed. He participated in the excitement resulting from the fatal accident at the Mt. Auburn Incline, little thinking that he would be killed in less than twenty-four hours. This gentleman, twenty-eight years of age, we understand, held an accident policy in the Equitable Accident Insurance Company, of Cincinnati, for which he paid $25.00 a year. Through this policy, on account of his death, his family will receive the sum of *five thousand dollars*. If he had been injured instead of killed, he would have received indemnity at the rate of $25.00 a week so long as he would have been disabled.

In conclusion, we desire to draw the attention of physicians to the importance of carrying insurance in an Accident Insurance Company. There is no one who can do the work of a physician but himself. If, therefore, he is disabled by an accident from attending to the practice of his profession, what is there to keep the wolf from the door if he is not insured in an accident company, or has not a pretty good bank account to his credit? Friends may come to his aid for awhile, but to accept assistance from them is to receive charity; but friends in a short time become weary. But an insured party has as much legal right to his indemnity as he has to fees owing to him.

Again, we think that physicians should encourage accident insurance among their patrons. We have frequently known physicians to obtain remuneration for their services in case of injuries to individuals, in consequence of the parties being insured in accident companies, when they would not have received a cent if such had not been the fact. When a man of family has been disabled from pursuing his employment for from twelve to twenty weeks, in consequence of a fractured limb, there will be nothing left to pay his doctor for his arduous services in attending upon him and restoring to him the use of his limb, but empty promises, although the grocer, the baker, the druggist, and others who supplied his wants, will have been fully remunerated. Physicians should by all means encourage the patronage of accident insurance companies.

CONGENITAL ELEPHANTIASIS.—A case of this nature was brought before the Eighteenth Congress of the German Surgical Association by Hr. Waitz, of Hamburg. The child, now two years of age, was the first-born of healthy parents, is delicate, rachitic, and its lower limbs are extraordinarily enlarged. The blood-vessels share in the enlargement. Telangiectases are marked. The lymphatic vessels are also increased in size, and the extremities are covered with vesicles filled with lymph. A considerable growth of hair is also present.—*Deutsch. Med. Zeitung.*

AMERICAN ACADEMY OF MEDICINE.—The American Academy of Medicine is endeavoring to make as complete a list as possible of the Alumni of Literary Colleges, in the United States and Canada, who have received the degree of M. D. All recipients of both degrees, literary and medical, are requested to forward their names, at once, to Dr. R. S. Dunglison, Secretary, 814 N. 16th Street, Philadelphia, Pa.

SYPHILITIC ULCERATION OF THE SOFT PALATE.—Dr. I. W. Condict, of Dover, N. J., writes:

I have recently witnessed satisfactory results from the persistent administration of SUCCUS ALTERANS in an aggravated case of the destruction of the tonsil, velum and all surrounding soft parts, where iodide of potassium had been exhibited more than two months in liberal doses, even as high as four hundred grains per day continually for three weeks of the time, and had failed to arrest the progress of the disease.

Something to Pick.

How many bones in the human face?
Fourteen, when they re all in place.

How many bones in the human head?
Eight, my child, as I've often said.

How many bones in the human ear?
Three in each, and they help to hear.

How many bones in the human spine?
Twenty-six, like a climbing vine.

How many bones in the human chest?
Twenty-four ribs, and two of the rest.

How many bones in the shoulder bind?
Two in each—one before and behind.

How many bones in the human arm?
In each one, two in each forearm.

How many bones in the human wrist?
Eight in each, if none are missed.

How many bones in the palm of the hand?
Five in each, with many a band.

How many bones in the fingers ten?
Twenty-eight, and by joints they bend.

How many bones in the human hip?
One in each, like a dish they dip.

How many bones in the human thigh?
One in each, and deep they lie.

How many bones in the human knees?
One in each, the knee-pan, please.

How many bones in the ankle strong?
Seven in each, but none are long.

How many bones in the ball of the foot?
Five in each, as the palms were put.

How many bones in the toes half a score?
Twenty-eight, and there are no more.

And now all together these many bones fix,
And they count in the body two hundred and six.

And then we have the human mouth,
Of upper and under thirty-two teeth.

And now and then have a bone, I should think,
That forms on a joint, or to fill up a chink,

A sesamoid bone, or a wormain, we call,
And now we may rest, for we've told them all.

—*Medical Recorder.*

CREOSOTE IN DISEASES OF THE AIR PASSAGES.—Dr. William Perry Watson, of Jersey City, N. J., speaks in very high terms, in a recent issue of the *Virginia Medical Monthly*, of the use of creosote in a number of forms of diseases of the air passages. He uses the remedy both by inhalation and internally. The inhaler employed is Robinson's Perforated Zinc Inhaler made by the Hazards, of New York. The inhalants, which he numbers one and two, are as follows:

(1). ℞. Creosoti (Morson's)
Sp. Chloroformi
Alcoholis, of each equal parts
M. Five to twenty drops to be used on the inhaler every three hours.

(2). ℞. Iodoformi, . . grs. xxiv
Creosoti (Morson's) M. iv
Ol. Eucalypti, . . M. viii
Chloroformi, . M. xlviii
Alcoholis, . .
Etheris, . . āā q. s. ad ℥ ss
M. Five to twenty drops to be used on the inhaler every three hours.

Creosote was given internally after the following formula:

(3). ℞. Creosoti (Morson's), M. xii
Glycerinæ (Price's), . ʒj.
Sp. Frumenti, . q. s. ad. ʒij.
M. Half teaspoonful every three hours well diluted.

Dr. Watson makes the following remarks: "In 1878, Beverly Robinson, of New York, said, 'I am very much pleased with this remedy, and believe it merits a very extensive trial.' During the succeeding seven years, Robinson continued its use, believing it to be a good anti-catarrhal agent, and upon the publication of Jaccoud's 'Treatise on Pulmonary Phthisis,' he became very much impressed with his 'statements about the advantages resulting from the internal exhibition of creosote in this disease.' And in an address before the American Climatological Association in New York, May 27, 1885, and in a clinical lecture at Bellevue Hospital Medical College, he advocates very warmly the use of creosote as an inhalant and by the stomach in the treatment of phthisis pulmonalis."

An article by Dr. Austin Flint, published in the *New York*

Medical Journal, December 8, 1888, entitled "Creosote in the Treatment of Phthisis Pulmonalis," impressed him so favorably that further investigation of the literature of the subject led him to commence its use during his service of December, 1888, in St. Francis' Hospital.

GLYCERINE SUPPOSITORIES.—These are made both by Eli Lilly & Co., of Indianapolis, and Parke, Davis & Co., of Detroit, of sufficient solidity to be easily used, of almost pure glycerine—ninety-six per cent. They are preferred to injections of any kind when a speedy evacuation of the bowels is required.

It has been found that an injection of a drachm of pure glycerine into the rectum will bring about an evacuation of the bowels in a very short time, on account of the great affinity, it is supposed, possessed by glycerine for water. We have prescribed it in our own practice, and have never failed with it; but it can be readily perceived that glycerine in the form of a suppository is much more convenient for use, than injected by a syringe in the fluid form.

If any of our subscribers should wish a few glycerine suppositories for trial, we have no doubt they would be sent them by addressing either Messrs. Eli Lilly & Co., of Indianapolis, or Parke, Davis & Co., of Detroit, and mentioning the MEDICAL NEWS.

DEATH FROM CHLOROFORM.—A death following upon the administration of chloroform recently occurred in this city. The deceased, whose name was George Dilhof, was thirty-two years of age and married. He was employed in a large publishing house of Cincinnati—Van Antwerp, Bragg & Co. While handling a large box it accidentally fell, striking his right thumb. As a result the first joint was so badly crushed that, we understand, pieces of bone protruded through the flesh, which was badly bruised. Dr. W. L. Mussey was called in and found that amputation was necessary, and proposed operating without using an anesthetic, as he did not think that the gravity of the operation made anesthesia necessary. Mr. Dilhof, however, insisted upon taking chloroform, and Dr. M. finally consented to its administration.

When Dr. Mussey proceeded to the patient's residence to operate, he took with him Dr. C. L. Evans to assist him. When everything had been made ready, Dr. Evans began the administration of the chloroform, using, it is stated, *a regular inhaler.* When only about a teaspoonful of chloroform had been administered, Dilhof was seized with convulsions, and died in a few minutes. Both physicians, so long as there were hopes that life was not extinct, labored to bring about resuscitation. The immediate cause of death, we learn, is attributed to paralysis of the heart.

It is not often that death results so suddenly upon the administration of chloroform, but we have known of a few instances. Some years ago, in a case of delirium tremens in this city, it was proposed to give chloroform to produce sleep. Not more than a teaspoonful of the fluid was poured upon a handkerchief, which was then held near the patient's nose. He did not take more than two or three inhalations when he died. The physicians, in that case, ascribed the cause of death to apoplexy—the brain being in a state of great congestion before the administration of chloroform—for the patient had been rendered furiously delirious by large and frequent doses of tincture of opium. We always regarded the treatment of the case a most miserable one of mal-practice—the patient having, beyond a doubt, been killed by the treatment to which he was subjected.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.—This organization, as we have before announced, will meet in Nashville, Tenn., this year. The sittings will be held November 12th, 13th and 14th. Members of the medical profession everywhere are invited. The President is Hunter McGuire, M.D., LL.D., Richmond, Va.; the Secretary is W. E. B. Davis, Birmingham, Ala.; Chairman of the Committee of Arrangements is Duncan Eve, M.D., Nashville, Tenn.

A great many papers are announced to be read. A few of them are: Reports of Gynecological Work, with Especial Reference to Methods, by R. B. Maury, M.D., Memphis; Open Abdominal Treatment, by B. E. Hadra, M.D., Galveston; The Importance of Early Treatment of Inflammatory Affections of the Uterus, by Wm. C. Dabney, M.D., University of Va.; The Relation of the Nerve System to Reparative Surgery, by Thos. O. Summers, Jacksonville, Fla.; Laparotomy in Extra-Uterine Pregnancy, by Waldro Briggs, M.D., St. Louis; An Experimental Study of Intestinal Anastomosis, by Jno. D. S. Davis, M.D., Birmingham, Ala.; Trophic Changes Following Nerve Injury in

Fractures, with a report of two cases, by Wm. Perrin Nicholson, M.D., Atlanta, Ga.; Tropho-Neurosis as a Factor in the Phenomena of Syphilis, by G. Frank Lydstan, M.D., Chicago; The Achievements of Modern Surgery, by J. Ewing Mears, M.D., Philadelphia; The Treatment of the Pedicle in Supra-Pubic Hysterectomy, by Wm. M. Polk, M.D., New York.

We consider it somewhat surprising that, with the great number of gynecologists there are in Cincinnati, and it a great city situated right on the border of the Southern States, no gentleman from it is down on the programme to be present and read a paper. This should not have been so.

Decease of a Dentist.—Dr. A. Berry, a highly esteemed and well-known dentist of Cincinnati, died in Boston, October 5th. His health had been failing for several months, and he had made a trip during the summer, accompanied by his wife, to New Hampshire, his native State, where he had relatives residing, with the hope that the bracing air of that State, change of scene, and relaxation from business would bring about recovery. He was mistaken, however, for his strength seemed to steadily decline, so that on starting homeward, when he reached Boston, he could travel no further, and there died.

Dr. Berry was a graduate of Dartmouth College. He was one of the founders of the Dental College of Cincinnati. He was a member of several dental societies, always taking an active part in their proceedings. Though in the seventy-ninth year of his age, he worked at the chair up until within a few months of his decease, when his failing health rendered him too feeble. He assured us on the day he left Cincinnati for the East, that he expected, on his return, he would be able to resume his practice—then lacking only a year and two months of being eighty years old.

His mental faculties were intact to the day of his decease. Old as he was, he prepared papers and read them before the dental societies of which he was a member. He was a strict vegetarian in diet. All his life he was a zealous advocate of total abstinence from the use of alcoholic beverages. He had held all the high official positions in the organization of the Sons of Temperance, being an active member of the one only remaining Division of that Society in Cincinnati.

To Dr. Berry is due the highest praise that can be awarded the best men—he was an honest, upright man, anxious to do his whole duty to his fellow-man. He possessed a generous heart, and was ready at all times to contribute of his means to the poor. We one time, in a very incidental manner, mentioned in regard to a woman who needed a pair of silk elastic stockings for the support of varicose veins of the lower extremities, with which she was suffering, but was too poor to purchase them. We did not for a moment expect him even to contribute anything toward relieving her necessity, but, on the next day, he requested us to purchase the stockings, and have the bill sent to him for payment. He had never seen the woman, and knew nothing about her.

Dr. Berry's family will have the profound sympathy of every one knowing him, in their bereavement.

TRAINING SCHOOL FOR NURSES.—Training schools for nurses have been opened in Baltimore and in Camden. The one in Baltimore is in connection with the Johns Hopkins Hospital. It was formally opened October 9, with eighteen students. The school in Camden is in connection with the Cooper Hospital.

A PEA IN THE AUDITORY CANAL FOR THIRTY-TWO YEARS.—Dr. W. F. Morgan, of Leavenworth, Kan., reports the following case: Mrs. William H——, German, aged forty, called on July 17, 1889, complaining of her right ear, stating that when eight years old she inserted a pea into each ear; that her mother removed the one in her left ear, but was unsuccessful in her attempts to remove the other, which she believed to be still in the ear. The patient was suffering from vertigo, nausea, and "noises" in her right ear. The watch could be heard only when in contact with the auricle. Hearing of left ear normal. After repeated irrigations, on three successive days, with warm rain-water, and the removal of much hardened cerumen, at the time of her third visit the pea was removed by a Sims uterine tenaculum. It was nearly perfect in form, but very black in color, after its sojourn of thirty-two years in the canal. The watch can now be heard at two feet, and all abnormal sensations have disappeared, except slight soreness of the ear, which will probably very soon entirely subside.

Meeting of the Anglo-American Medical Society.—The first social gathering of the Anglo-American Medical Society took place at the Grand Hôtel, Paris, on the evening of September 30, 1889. This Society owes its origin to the initiative of Dr. Thomas Linn. Among the members who attended were:—Sir Spencer Wells, the distinguished London surgeon, who presided; Dr. Stanley M. Rendall, Aix-les-Bains; Dr. Wakefield, Aix-les-Bains; Dr. G. H. Brandt, Cannes; Dr. F. M. Sandwith, Cairo; Dr. St. Clair Thomson, Florence; Dr. C. E. Cormack, Hyères; Dr. Wm. Niven, Lausanne; Dr. J. A. Barnard, Dr. Boggs, Dr. Bull, Dr. John Chapman, Dr. Dupuy, Dr. Faure-Miller, Dr. Hon. Alan Herbert, Dr. Oscar Jennings, Dr. D. Hogg, Dr. Thomas Linn, Dr. C. J. Loughnan, Dr. Nachtel, Dr. J. G. Ponce, Dr. E. Warren-Bey, and Dr. Webb, all of Paris; Dr. W. H. Bagnell, Pau; Dr. F. J. R. Holland, St. Moritz; Dr. Mackenzie, Spa.

Among the invited guests were:—Dr. Madge, of London; Dr. Dean, Dr. Loewenburg, and Dr. Landolt, of Paris; Dr. Worms, of the French Academy of Medicine; Professor Michāelis, of the Paris Dental School; Rev. Mr. Ratcliff, of Paris; Mr. Robert J. Seabury, of New York; Dr. Schetelig, of Hamburg; and Mr. J. H. Hobson, of the Anglo-American Bank.

After the guests had done justice to an excellent *menu*, Sir Spencer Wells rose and proposed the toast of "The Queen, President Harrison, and President Carnot," which was drunk standing. Then "Long Life and Prosperity to the Society" was proposed by the President, and felicitously responded to by Dr. Hon. Alan Herbert. Sir Spencer's "health" was given by Dr. Faure-Miller in a neat little speech. Sir Spencer's "heart-felt thanks" were warmly applauded.

Dr. Dupuy spoke to "Our Invited Guests," to which Dr. Worms replied, highly complimenting Sir Spencer Wells on his remarkable achievements in surgery, referring especially to ovariotomy, which the speaker himself, after much opposition from the profession, had at last been able to introduce into France. Dr. Worms then declared that he was sure that English and American medical men would, in the pursuit of their scientific studies, be received in the future, even more than in the past, with that cordiality characteristic of the French medical profession at the capital.

The last toast of the evening was then proposed by Dr. Holland, of St. Moritz, who thanked the Hon. Sec., Dr.

Thomas Linn, for having made it possible for them to enjoy such a delightful evening.

Dr. Linn, on rising amidst general applause, said: "In returning thanks for the kind and flattering toast proposed to my health, I can only say that I am pleased to find that my share of the efforts to promote social intercourse and good fellowship between our brethren who practice abroad is appreciated. I trust that the future will increase the present kindly feeling that exists between us, and that we shall *all* meet again next year in good health."

TYPHOID BACILLI IN DRINKING-WATER.—The *Deutsche Med. Wochenschrift*, July 4, 1889, says the *Reporter*, states that in a certain part of a bathing village of Baden several cases of typhoid fever occurred in 1888. It was then learned that three of the persons who were taken sick in December drew their drinking-water from the same spring. In order to examine the water for bacteria, a flask holding about six fluid ounces, provided with a ground-glass stopper, was rinsed out with a one per cent. solution of corrosive sublimate, and then sealed air tight with a rubber cap. The cap was removed at the spring, the water pumped for five minutes, and every trace of corrosive sublimate removed from the flask and stopper. The bottle was then filled with the suspected spring-water and sealed with the stopper and rubber cap. Plate cultures made from the water showed after three days, on the average, 140,000 colonies for each cubic centimeter. A few colonies of typhoid bacilli developed on tin plates. These bacilli grew upon potatoes and showed the so-called polar granules. Hitherto typhoid bacilli in drinking-water have been certainly demonstrated only rarely.

OHIO STATE SANITARY ASSOCIATION.—The seventh annual meeting of the Ohio State Sanitary Association will meet in the hall of the Young Men's Christian Association at Dayton November 21st and 22d.

A great number of papers on various sanitary subjects are on the list to be read. Among them is one by Dr. D. J. Snyder, Scio, O., on "The Relations of Theologians to Sanitarians." Another is "The Sanitary Teachings of the Bible" by Prof. E. T. Nelson, of Delaware, O. Dr. Battles, of Shreve, will read a poem on "Bacteria, or the Flies we Feed on, and the Bugs that Kill us."

It is stated that, through the courtesy of the Central Traffic Association, persons attending the meeting will be granted a reduction in their railroad fare. But the conditions are so many and so troublesome, that if we expected to attend, we would not think, for a moment, of taking advantage of the reduction. We are astonished that a committee would waste nearly a whole page in fine type in publishing such insulting conditions. After purchasing a ticket at full highest rates from the starting point, two of the many conditions are, first, obtaining a certificate of the fact from the agent; second, identification of the person purchasing the ticket, on presenting it, that he is the party who bought it. We presume the purchaser will be under the necessity of having his photograph taken upon the ticket.

HOMEOPATHY.—The *Medical News* of Philadelphia, in a recent issue, gives as a reason for the bitterness of many medical practitioners toward homeopathic physicians, that "experience has taught them that the bulk of the homeopathic practitioners owe, in great part, their success to their not practicing what they preach, to their claiming that they avoid strong medicines, while, at the same time, they use drugs in much the same manner as do other doctors."

We have had very full opportunities of becoming acquainted with the *modus operandi* of treating diseases of quite a number of the most eminent homeopathic practitioners of Cincinnati—several of them holding chairs in Pulte Medical College—and we know that their methods do not differ at all from those of regular practitioners—especially in the way of administering large doses of medicines. For meeting the same indications for which an "allopathist" would prescribe them, and in the same doses, they prescribe calomel, opium, quinine, tartar emetic, iodide of potassium, hydrate of chloral, antipyrine, antifebrine, sulfonal, etc.

Not long ago, a young homeopathic physician, with whom we had been brought in contact a number of times, when engaged in other than professional business, mentioned to us when he accidentally met us on a certain occasion, that he was treating a case of syphilis which, up to that time, had made very unsatisfactory progress. He said that he had tried every sort of treatment, but the results had been unsatisfactory. We inquired if he had administered iodid. potass. in twenty and thirty grain doses. He replied that he had. Also he stated that he had used mercurials until ptyalism had been produced. We suggested arsenic, but was told that that also had been exhibited.

Think of it! Here was a physician, a graduate of a homeopathic school of medicine, who was giving out to the world that he was practicing a peculiar system of medicine superior to the method of regular physicians, a leading principle of which was that medicines should be given in infinitesimal doses—a homeopathic physician, we say, prescribing powerful drugs in doses that many regular physicians would hesitate to give their patients. This doctor undoubtedly exhibited his infinitesimal doses only in such cases that a regular physician would prescribe placebos.

We have been told that, of the scores of homeopathic doctors in Cincinnati, only one practices according to the rules of Hahnemann. We doubt if there is one. Not a few homeopathists have told us that in treating diseases they employed such remedies and such doses of them as experience and observation taught them were beneficial; and no doubt the declaration is true. Consequently their practice does not differ from that of regular physicians.

Now and then it happens a homeopathic physician, in endeavoring to practice according to the principles of observation and experience, makes a misuse of them. We will illustrate. Happening to meet a certain time a professed follower of Hahnemann, with whom we were acquainted, and whom we regarded as a very clever gentlemen, we remarked to him that we had learned that a very near lady relative of him had recently died. He replied that it was true; and that her death was remarkably easy and free from all distress. In fact, he said, that she passed away in sleep. Two or three hours previous to her decease she had suffered greatly, but, he said, he took a glass and poured several spoonfuls of water in it—then he opened a bottle of morphine and shook a quantity of it into the water in the glass and stirred it up with a spoon. He seated himself in a chair at the side of the bed and began giving her a teaspoonful of the solution in the glass "every now and then," saying, "Come, take this, dear; it will do you good—it will ease your pain." Presently her pain commenced getting better, and as it grew less, he continued giving her the anodyne. "Finally, don't you believe," he stated, "she became entirely free from pain." "After she had become quite easy I gave her a few more doses, and she fell asleep, and while sleeping she passed away."

After assuring us that he had never before witnessed such wonderful effects from a remedy—it having so completely relieved her of all suffering—and, in consequence, that she had passed away so easily, and so sweetly—he passed on, and we proceeded on our way, meditating upon the wonderful effects of morphine, as related to us.

An Act to Provide for Preliminary Education of Medical Students.—The New York State Legislature, we understand, has passed a law entitled as above. A copy of it has recently been sent to the physicians of the State, together with the rules adopted by the Regents of the University of the State of New York for the examinations, and the places and dates appointed by them.

We learn that the examinations are in arithmetic, geography, orthography, English grammar, American history, rhetoric, English composition, and elements of natural philosophy. The candidate is expected to have a thorough knowledge of the whole of a standard text-book on each of the required subjects, but cube root will not be included in the arithmetical examination. Seventy-five per cent. of correct answers is required in all subjects except orthography, in which eighty-five per cent. is required. After successful passage of all examinations the candidate will receive a medical student's certificate.

The *Times and Register* calls this "a feeble, yet not uncertain, step in the interest of higher medical education." We admit that it does not go as far as it should; but still, the strict enforcement of the law will no doubt accomplish a great deal of good. It will, as has been stated, prevent the entrance into the profession of men who, debarred by lack of an ordinary education, from other pursuits, have hitherto sought refuge in menicine. After a time, too, if it is found that these qualifications for matriculants can be maintained, still higher ones will be proposed and a law compelling them passed.

The medical press and the medical profession can not too severely sit down on spurious preparations. In this connection the attention of the physician is called to the remarkable revelations made in a communication from Messrs. Tarrant & Co., of New York, printed elsewhere in this issue of our journal. Read it. It contains information that every physician who is interested in nutrient preparations should know.

THE
CINCINNATI MEDICAL NEWS.

VOL. XXII. No. 263. Old Series. NOVEMBER, 1889. VOL. XVIII. No. 11. New Series.

Original Contributions.

Some Practical Points in Railroad Surgery.

BY WILLIS P. KING, M.D., SEDALIA, MO.

Read before the Medical Association of the State of Missouri.

I do not know that I need apologize for using the term "Railroad Surgery," since the president of this association appointed me as chairman of this sub-section. Yet there are those who object to the use of the term, contending that surgery is surgery, that a wound is a wound, no matter how produced, and that all wounds are subject to the same treatment and management, that treatment and management varying only with the situation, character and degree of the injury. I admit the justice of the criticism to a certain extent, and yet the term is being constantly used by the profession. State associations and other medical bodies appoint committees on "Railroad Surgery," so that it is rapidly becoming as distinctive a branch of the art of surgery as that of "Military Surgery."

Whatever reference is made to it, it is fair to assume that it is meant to cover that class of serious and crushing injuries such as are made by large and ponderous machinery in motion, the engine, the moving train, the machinery in shops driven and kept in motion by the powerful and ponderous driving wheel. Accidents caused by this class of machinery send to us everything, from a slight abrasion, or the loss of a nail, up to a fracture simple, compound, comminuted and complicated of the extremities, of the spine and skull, and injuries of the viscera and of the thorax, abdomen and pelvis. Many of these injuries are of such a nature as are rarely produced in other ways than in the operation of railroads.

In presenting a few "practical points" on this subject, which are the result of many years' work in this particular field, I desire to say at the outset that there is no department of surgery in which the application of antiseptics is more necessary, nor where better results are secured, comparatively speaking, than here.

With crushing, bruising, grinding and laceration of the soft parts, the breaking of the integument, the tearing of the connective tissue, the destruction in part or in whole of the circulation, and the benumbing of the local nerve supply, with dirt, grease, coal dust and other foreign substances ground into the wound, the foundation for blood-poisoning is laid in almost every case.

Such a field can not be cleansed with the simple act of washing. It must be made antiseptically pure by bringing in contact with every shred of the contused and lacerated mass some substance that is capable of destroying everything in the nature of an organic germ that may be present anywhere about the wound.

This chemical cleansing hastens the separation of the living from the dead; totally checks or greatly limits the process of suppuration, thereby preventing much pain, freeing the injured person from fever, and, when well and thoroughly done, renders him entirely safe from the danger of septicæmia.

There is no doubt in my mind that the greatest danger of blood-poisoning is immediately or soon after an injury is inflicted.

When the tissues are rent and torn, and a thousand avenues are open for the entrance of all forms of germ life, is the time of greatest danger, and this is the time when surgeons should exercise the greatest care. After a few days, when nature has had sufficient time to recover from the shock, she closes the doors against all intruders, and so far as she is able, raises a wall of protection against the enemy. I do not mean to say that we should ever be negligent in regard to the matter of cleanliness in wounds, but we should be doubly diligent immediately after an injury has been inflicted.

PAIN IN LACERATED WOUNDS.

My attention has often been called to the unusual painfulness of lacerated wounds. This has been more especially marked where there was *necrosis* of the soft parts, where there was death and sloughing of the tissues deprived of their circulation by the character of the injury. I was at a loss to account for the unusual amount of pain compared with other wounds, until I noticed that when the sloughing process was over, and *the dead was separated from the living*, the pain ceased.

With this "pointer" from nature I began in all such cases to remove the sloughing tissues as soon as the line of demarkation was well defined. I have found that by thus anticipating nature, I have been enabled in a great many cases to save the injured person much pain. I can not explain it, but there is something about the contact of *the dead and dying with the living* that gives rise to much pain. The pain is in the living, of course. It may be caused by the effort to separate and throw off the dying, or it may be that tissue which is dead or dying may act as a foreign body or as a chemical irritant. Whatever may be the cause of the pain, the fact remains that the patient may be saved from much pain by the cutting away of the dead and dying as soon as we know where to cut. This may not be new to many here; but it is a matter that I do not remember to have ever seen in any work on surgery, nor to have ever heard in a lecture, so that it is fair to presume that it will be new to some of you.

AMPUTATIONS.

It is an easy thing to make an amputation. Almost anybody can do it, after a fashion; but to do it right, to remove the part which has been rendered useless by violence in such a way as to insure safety to the injured person, and at the same time leave him a useful stump, a stump to which may be adapted a useful artificial limb that may be worn without pain or serious inconvenience, requires thought, experience, skill.

The question also often arises whether to amputate or not. Under the old method surgeons were often forced to answer this question in the affirmative, because they knew from the nature and character of the injury that they could not save the limb. Experience taught them that, with certain injuries, if amputation was not done, they would be sure to have suppuration, septicæmia, fever, death. But we are not forced into any such hasty action under the use of antiseptics, for we can wait and keep an injured limb in a reasonably good condition (if the circulation be not entirely cut off) for an indefinite period and still have no fear of blood-poisoning. If the limb below the site of injury is still warm, and if the structures at the site of injury are not wholly destroyed, we can wait. Nature is wonderful in her reconstructive power, if she is not deprived of material with which to do her work.

When we decide to amputate, the question of first consideration is, how can we give the patient the best possible stump for future usefulness? This applies more particularly to the lower extremities.

This may be done:

First, by the kind of flaps made.

Second, by operating under conditions that will give reasonable assurance of "union by the first intention."

The one thing to be avoided is that of having cicatricial tissue in the end of the stump. Cicatricial tissue is granulation tissue covered with a thin film of connective tissue. It is a low and degraded tissue. is never well supplied with blood, and therefore breaks down easily and becomes sore under pressure. This necessitates the laying aside of the artificial limb and the resumption of the crutches for a time. Cicatricial tissue also has within it sensitive and painful nerves.

These difficulties may be met and overcome in most instances:

First, by having the line of union elsewhere than on the end of the stump.

Second, by securing union by the first intention and thereby having no cicatricial tissue, no breaking down, no painful nerves bound up in an indurated cicatrix.

As is well known to you, a great number of the amputations that must be made in the lower extremities must be made between the ankle and knee, and also a majority of the injuries are in front, so that we, as a rule, have a greater field posteriorly from which to select a flap than we have anteriorly.

For amputations in the middle and upper thirds of the leg I have recently made a flap which is a modification of Teale's, which, I think, is the best that can be made. It is a long posterior flap—indeed, it is all posterior flap, for the tissues anteriorly are removed for one or two inches above the point at which the bone is sawed through. When the flap is trimmed and made to fit, and the parts brought together, the line of union is thrown above and on the sides. I think this is a better flap than Teale's for amputations that must be made in the middle and upper thirds of the leg.

To operate under conditions that will give reasonable assurance of union by the first intention is,

First, to go as far away as possible from the point of injury.

Second, to always operate under the strictest antiseptic precautions.

Third, to do secondary amputations whenever it is possible to do so. Every surgeon who has had to deal with railroad injuries knows that when a car wheel passes over a limb, in addition to the serious injury inflicted at the point over which the wheel has passed, there is an extension of the injury far beyond that point. We will say that the wheel has passed over the ankle joint. It will be found that the connective tissue has been torn for some distance up the limb; there will be ruptured blood-vessels with effusion of blood, so that the limb will be "black and blue" for some distance beyond the actual site of injury, and there must be in the very nature of things serious injury inflicted on the local nerves supplying the part. When we cut into these tissues for the purpose of making an amputation we find the integument loosened, the connective tissue torn and blood clots in many places. Now, to make an amputation through tissues so injured is not to do so with the confident assurance of securing union by the first intention. In going higher up we must often sacrifice so much of the limb as to seriously impair its future usefulness. The question naturally arises here, would it not be better to wait, to roughly lop off the part beyond the injury, secure bleeding vessels, antisepticize the wound, dress antiseptically and wait for nature to prepare the parts for amputation? Then wait until the normal condition of the local nerve supply has been re-established, until the effused blood has been absorbed and the ecchymosis disappears, and then select the best site and make the ampution under conditions that will reasonably insure union by the first intention.

I know that I will be met with opposition here. It will be said that we have no right to put the life of an injured person in jeopardy twice, when all that is to be done may be done at one operation. I am not sure that we jeopardize the life of the patient by the line of action proposed.

With the dead and dying entirely removed, and that which remains put beyond the danger of suppuration, of inflammation, of sepsis, by the treatment applied, there is no reason in saying that we doubly jeopardize the patient's life. I believe that the mode of procedure in the future, in such cases as I am now considering, will be to cut away the dead immediately after the injury is inflicted, antisepticize and wait, wait until the parts through which we must amputate have practically returned to their normally healthy condition, so that we may reasonably expect union by the first intention and thereby secure stumps without granulation tissue, covered with a friable film which must pass muster and do duty for integument, and which breaks down and becomes a troublesome ulcer upon very slight provocation.

These are considerations of great weight to those who must limp through life and obtain a living by the sweat of their brow, whether they have a good stump or a bad one.

It is a question of first importance to a cripple to know, if he must limp, whether he shall limp with pain or without it.

I will not say that by the use of antiseptics we have not had good results under ordinary circumstances in primary operation, for we have had, but in secondary operations the results have been uniformly good, the very best that could be expected under any circumstances.

CASE I.—J. J. Schupp, American, aged twenty-eight, brakeman on M., K. & T. Division of Missouri Pacific Railway, was injured on October 31, 1886, by breaking of stirrup to ladder on freight car, letting his foot in between car wheel and brake shoe, where it was crushed through instep. The amputation was made through the tarso-metatarsal junction, and in addition portions of some of the tarsal bones were removed with the saw. The posterior flap being much bruised, did not do well, a large part of it sloughing away. The parts were treated antiseptically and left to heal by granulation. After six months there was an irregular point as large as a silver dollar still unhealed, and was discharging a greasy serum, which indicated degeneration of bone. Upon investigation, it was found that the *os calcis* was carious. I decided to make a subastragaloid disarticulation of the foot, De Lignorelles' operation.

The flaps healed by first intention, and the cicatrix is anterior and above, so that there is no pressure on the cicatrix whatever when he walks. He has a shoe with steel braces up the sides of his legs, and walks with very little lameness and without pain.

CASE II.—M. F. McClintock, yard-master at Nevada, Mo., was knocked down and had a car wheel run over his left ankle, on December 9, 1887. The circulation in the foot was not entirely destroyed, so that we decided to wait. The wound was quite extensive on both sides of joint, and the ankle joint was opened. The wound was thoroughly cleansed with antiseptic washes, dressed antiseptically and put in a good position for rest. After three weeks, during which time the foot was inspected and dressed every three or four days, we decided that the foot could not be saved. At this time it was found that the effused blood in the leg had been absorbed, and the leg had a normal and healthy appearance. The operation heretofore mentioned (long posterior flap) was made, and union by first intention was obtained practically without fever, pain, or any constitutional disturbance except that which was caused by the ether.

CASE III.—Ed. M. Conrad, American, age twenty-two, brakeman, fell from train on K., N. & D. Division, on April 15, 1887, both legs being run over by a number of cars. He was taken to Topeka, Kansas, and both legs amputated on the same day.

The right leg was removed by antero-posterior flap in the upper part of middle third; the left was disarticulated at knee joint (Stephen Smith's operation). He was received into Sedalia Hospital on May 8, twenty-three days after the injury. It was found upon examination that all the flaps had sloughed away, leaving the ends of bones to be covered by granulations.

After eight months' watching and attention to these limbs there was a large irregular space on the ends of both stumps which was not healed, and it was very apparent that it would never heal so that he could wear artificial limbs, as there was so much cicatricial tissue in both stumps that, as he must bear his weight equally on both limbs and could favor neither, he would always have sore stumps, and the wearing of artificial limbs would be impossible. We made re-amputations in both at different times (both operations being done by my first House Surgeon, Dr. Edwin F. Yancey).

In both of these operations the cicatrix was cut out, and the skin and other tissues dissected back and the ends of the bones sawed off so that the flaps were brought together without tension. He suffered no inconvenience in either case except from the ether. There is not a particle of cicatricial tissue in either stump, and he is now wearing artificial limbs without pain, and is enabled to go up-stairs and get on and off street cars, using only a cane with which to steady himself.

CASE IV.—B. F. Young, American, age twenty-five, engineer. Was caught under a derailed engine and held fast for thirty minutes, while boiling water was pouring over his left leg and foot, from some part of the engine which had been broken. This was on January 30, 1887, and he was admitted to the hospital the same day. It was found that there was a deep and extensive scald, embracing the foot and the anterior surface of the leg over the lower and middle thirds. The soft parts were literally cooked, so that after a few days we cut away the superficial veins above and below and threw them away, as so many impervious strings. It was plain to be seen that this leg could not be saved so as to make a useful limb. Amputation was proposed and declined, and the limb was kept under treatment for eight months. The anterior surface of the tibia for six inches in length was exposed, eroded and black. After about eight months Mr. Y. became satisfied that he could never use the limb. The amputation was made at a point a little below the junction of the middle and upper thirds. The flap made in case II. was adopted, excepting that it was modified to some extent on account of the cicatrix anteriorly and the fact that a posterior flap of sufficient length could not be obtained on account of the extension of the burn to the posterior part of the leg some distance above the ankle.

We had union by the first intention in this case, and Mr. Y. is now wearing an artificial limb without pain, and is running a passenger switch engine in the Kansas City Yards, and gets on and off his engine, he informs me, without trouble or pain.

OPERATIONS ABOUT THE FEET.

In operations about the feet it is often a question as to what amputation shall be made in order to give the patient the best possible limb, so as to enable him to walk reasonably well afterward. Of course it is best, as a general rule, to sacrifice as little of the foot as possible, so that in crushing injuries about the toes it is best to sacrifice the toes alone if it can be done. When we must go beyond the metatarso-phalangeal junction, the next point of selection is at the junction of the tarsal with the metatarsal bones where Chopart's and Hey's operations are usually performed. It has been my experience that there is one difficulty which obtains after these operations, and that is the tendency of the heel to draw up, so as to throw the weight of the body on the cicatrix. This is caused by the fact that the tendons of the anterior muscles are severed in the operation, and the *gastrocnemius* and *soleus* having nothing to antagonize them, get into a state of tonic contraction or become *contractured*, as Dr. Sayre puts it, and so draw the heel upward.

It has occurred to me that in these operations the tendons (being as a general thing not injured so badly as the other tissues) might be cut *long* and carried over the ends of the tarsal bones and fastened by stitches under the posterior flap. I throw out this suggestion for what it is worth, as nothing is impossible in modern surgery. If they could be so fastened and made to *live*, the muscles to which they belong would certainly continue to antagonize the posterior muscles and so remedy the difficulty.

When we get beyond the tarso-metatarsal junction, we must do either Syme's, Pirogoff's or De Lignorelles' operation, or some modification of these, or go above and make the amputation in the leg.

When it is practicable, I prefer the *subastragaloid disarticulation* of De Lignorelles. It makes a pretty stump, the ankle joint is preserved, the cicatrix is not on the end, and the patient has the old, hard integument of the heel to walk upon. Any good work on surgery will give to those not familiar with this operation, all of the details as to how to perform it. In removing the *os calcis*, I use strong, straight scissors on the sides, and curved scissors on the posterior portion, which facilitates matters very much and renders its removal much less difficult. If the points are kept close to the bone, there is very little danger of cutting important blood-vessels.

Case I. is an illustration of the result after this operation. In the recital of this case, I forgot to say that in removing the *os calcis*, it was found to have been fractured, and the whole bone was in a state of caries.

CASE V.—Walter Roseberry, age twenty-six, brakeman on K. & A. Division, admitted November 16, 1887, having been injured the night before. Eighteen cars had passed over him, and it was presumed, from the position in which he was found, that they had all passed over the instep of both feet. The feet, from the instep down, were ground into mince-meat.

The operation instituted by De Lignorelles, and popularized

in 1846 by Malgaigne, was performed on both feet, Dr. E. F. Yancey amputating the left, and I the right. We were compelled, on account of the extensive lacerations about the upper part of the foot anteriorly and about the ankle joint laterally, to use lacerated integument in the flaps. Union by the first intention was obtained nearly throughout in both operations.

The points at which the greatest pressure will come are covered by the old, hard tegument of the heel. He writes me that he can walk on these naked stumps by using crutches. He is now in St. Louis having artificial limbs adapted, with every hope of soon being able to walk quite well with the use of a single cane.

Translations from Our Foreign Exchanges.

Translated for Medical News, from the French, by Dr. Illowy, Cincinnati, Ohio.

NOCTURNAL INCONTINENCE OF URINE CURED BY THE INDUCED CURRENT—BY DR. HENRY PICARD.

A boy thirteen years of age, born of a healthy and vigorous father, but of a mother nervous, impressionable and slightly inclined to melancholia; is well formed, and although somewhat pallid, enjoys excellent health; temperament calm. Unfortunately he has not passed, since his birth, twenty nights without urinating in bed one or more times. All the well-known methods of treatment were employed in this case, from belladonna to circumcision.

For a long time I advised the father to have recourse to the induced current, but the mother, fearing that the sexual desires might be precociously aroused, conceived an unconquerable aversion thereto.

Nevertheless, at the beginning of the last year, an eminent surgeon having been consulted, and having, like myself, advised the induced currents, the parents consented and brought the patient to me for treatment.

In his consultation, the surgeon had said to them: "Make an application every second day of two minutes' duration, and if at the end of two weeks there is no improvement, leave it off, as it is useless."

I was not of the opinion of the surgeon, being convinced that the currents would be beneficial, but that they would have to be continued for a longer period of time, and the facts have proved me correct. After an application of fifteen days, we were not much further than on the first day. It was only after a month and a half, with sitting every third day, that we had the gratification of seeing the incontinence arrested for a time. And, in fact, seeing the case improve, we continued as we had begun and reached the month of May, that is to say, the fourth month of treatment. At this period, the patient having passed twelve consecutive nights without wetting his bed, treatment was stopped, and up to the second of August, that is to say for a period of three months, the patient had not a sign of incontinence.

The patient could be considered cured, as he took no especial care about his food or drink, dining in the city and partaking as others did at the receptions of his parents.

Unfortunately, on August 2, he departs for the seashore, and the same night he wets his bed, and does this every night without exception during the whole period of his stay—two months.

In the beginning of October, resumption of the sittings, two per week. From the very outset amelioration began to manifest itself, and becomes confirmed, so that already, about the beginning of November, that is to say, after ten sittings, the patient can again be considered as cured.

However, toward the middle of January he has some bad nights, and treatment is resumed. After the seventh sitting the amelioration is again marked, and actually, treatment being continued only at rare intervals, the patient may be considered entirely cured.

Without expatiating on this subject any further, I would say that it seems to me incontestably proven that the application of the induced currents was of the greatest benefit to our young patient, whilst the sea air was prejudicial to his health.

If I should be permitted to add a few words, I would say that the urethra of children affected with incontinence being very tender, we must proceed with the greatest tenderness when introducing the olive-pointed electrodes into the membranous region; that the application should be made every second or third day; that they should not be of longer duration than two or three minutes, and even in that time they should be interrupted, and with all that the currents being as mild as possible.—*Journal de Med. de Paris.*

ICE IN THE NIGHT-SWEATS OF PHTHISICAL PATIENTS.

Rosenbach (*Bérl. Klin. Woch.*, 5) recommends the appl cation of an ice-bag, half full, to the abdomen, which i allowed to remain for several hours. This measure is we borne by the patients, even by those who have evening exace bations of the temperature. It acts in cases where the atro pine and salicylate in powder over the body have failed. Th ice can be applied for several nights successively without an danger to the patient.—*Ibid.*

ON THE LOSS OF TENDON REFLEXES IN DIABETES.

This phenomenon, observed for the first time by M. Bou chard, has already been the subject of several works. Latel Dr. Nivière has collected in his thesis several new docu ments bearing on this subject.

He remarks at the outset that the investigation of thes reflexes may be negative unless we resort to the metho devised by Jendrossik, and which consists in having, in deli cate cases, the person make muscular efforts of a regio other than that under examination. For example, when h percusses the patellar tendon, he directs the patients to jo the fingers of the left hand with those of the right, to stretc out the arm, forward, in a horizontal direction, and to ab duct it as violently as possible. By this method we ca discover a reflex which it would have been otherwise impos sible to find, and thus avoid a cause of error.

In summing up all the statistics published to date, we fin that eighty-nine out of two hundred and ten diabetics, or little more than forty-three per cent., presented either a absolute loss of, or a very tender depression in the tendo reflexes. A remarkable fact is this, that the state of reflec tivity does not remain stationary. The loss of reflexes, i fact, is found frequently coincident with an aggravation o the malady; on the other hand, it disappears frequentl when the patient is improving.

If the loss of the reflexes is of great value from a diag nostic standpoint, this value is not absolute, for it is demon strated, first, that this loss can exist in subjects perfectl healthy in the proportion of about one and a half per cent. moreover, it is met with in various groups of affections o the nervous system. It is, then, from the standpoint of prog nosis that this phenomenon has the greatest value. Th French authors are unanimous in the opinion that the los of the reflexes in diabetics is a symptom which aggravates the prognosis. From a surgical point of view, any operation should be avoided in patients presenting this phenomenon, and, on the other hand, statistics show that in the identical conditions death supervened thirty-four times (thirty-four per cent.) in diabetics who had lost their reflexes, and only five times (five per cent.) in those who had conserved them. However, though, we find examples where diabetics who have preserved their reflexes have died, the rule, nevertheless, holds good that all diabetics who have lost their reflexes are affected with a grave malady, or are passing through a grave period of their disease.—*Jour. de Med. and de Ch. de P.*

TREATMENT OF HAY FEVER.

In the *Archives of Laryngology* Dr. Ruault details the methods of treatment which, in his hands, have had the greatest success in the treatment of hay fever, whenever such surgical intervention was not necessary, or was inopportune.

Among the internal medicines, quinine may be useful when employed at the proper time and in sufficiently active doses, but he advises antipyrine, which, in sufficient doses, three grammes (forty-eight grains), for example, for an adult, (two grammes, taken at once in a quarter of a glass of Vichy, and one gramme taken in a like way a quarter of an hour afterward), may sometimes prevent the explosion of disease, if taken just shortly before its appearance, or greatly moderate it, if taken a short time after its appearance.

Among external remedies the nasal irrigations, lukewarm, antiseptic, especially the aqueous saturated solution of boric acid (thirty-three to one thousand), the inhalation of vapor of water, to which tincture of benzoin has been added, seem very useful.

Cocaine enables us sometimes to arrest the paroxysms almost instantaneously, especially if made use of at the outset. In order to have a chance to succeed, strong solutions must be used (one to five). Dr. Ruault uses the following formula:

℞. Cocaine Chlorhydrate, 2 grammes.
Glycerine, . . 4 grammes.
Aq. Distill. q. s. to make 10 Centimetre Cub.

M. As soon as the paroxysms appear, the whole nasal mucous surface, as far as it can be reached, is painted with this mixture with a soft brush; a second application is made five minutes after the first. As patients who treat themselves make these applications usually very incompletely, it is better to direct them to use a good rubber insufflator, and to throw in the following powder:

℞.	Cocaine Chlorhydrate,	2 grammes.
	Benzoin, finely pulver.,	6 grammes.
	Sacch. Alb., finely pulv.,	2 grammes.

Mix thoroughly and make fine powder.

Not only may the cocaine modify the severity of the paroxysm, but its action may be more lasting, and in two instances M. Ruault saw the disease arrested for the whole season after a few insufflations. Thus, not alone may the vaso-constrictive action of the cocaine be lasting, but it may also cause the disappearance, for a long time, and perhaps indefinitely, of the hyperæsthesia of the mucous membrane, which forms part of the malady known as hypertrophic rhinitis.—*Jour. de Med. and de Chir.*

New York Neurological Society.

THE PRESIDENT, G. W. JACOBY, M.D., IN THE CHAIR.

Stated meeting, October 1, 1889.

Dr. A. A. Boyer presented a case of

LESION OF THE PONS,

with a history, of which the following is a brief synopsis:

C. W. B., aged forty-five, syphilitic, in June, 1888, while at work, felt a sudden sensation at the occiput, as though he had been shot. It was immediately followed by intense headache and nausea. Later, vomiting and insomnia became prominent symptoms, lasting for six weeks. There was then an interval of two weeks without these symptoms, after which they returned in greater severity. On August 14th, his left thigh became cold and numb; which sensations, in a few hours, extended up the trunk, left arm, and left face. In the morning there was anæsthesia with paralysis of the entire left side of the body. When first seen, eight months later, he had a hemiplegia gait, inco-ordination and paralysis of the left arm, good equilibration, paresis of the left leg, drooping of left side of mouth, and left-sided hemi-anæsthesia and hemi-analgesia. The lesion would, therefore, seem to be located in the pons, to the right of the median line, above the line of Gubler, and involving the fillet, the reticular formation, and pyramidal tract. The speaker thought a lesion here would be high enough to produce paralysis of the facial muscles of the opposite side, and low enough to leave unaffected the ocular nerves. He believed the most reasonable theory as to the nature of the lesion was thrombosis resulting from obliterating endarteritis or hemorrhage.

Dr. Birdsall saw no necessity for assuming a lesion of the pons to explain the symptoms, which seem to be wholly unilateral. He usually expected something particularly characteristic in pontic lesions, such as alternating paralysis. He thought a capsular lesion would account for all the symptoms in this case, the absence of other ponic features strengthening such a view.

Dr. Starr agreed with Dr. Birdsall as to the localization of the lesion. He believed the case to be one of ordinary hemiplegia, with a lesion in the internal capsule. Unless there were alternating paralyses, or some other characteristic symptoms, it was necessary to locate the disease in the pons.

Dr. Boyer in closing the discussion said he located the lesion in the pons because there was no loss of consciousness at the onset of the attack, although decided and varied paralyses immediately followed. In his opinion this pointed strongly to a minute lesion, which only in the pons could produce such marked symptoms. The inco-ordination now remaining after the disappearance of most of the motor symptoms indicated lesion of the fillet or of the commissural fibres in that vicinity.

Dr. L C. Gray then read a paper entitled

THE CURABILITY OF LOCOMOTOR ATAXIA.

Speaking first of the modern knowledge of the pathology, he then went into the question of histology. He regarded the original focus of disease as a cellular or inflammatory alteration of the cord, sometimes possibly a meningitis, from either of which the ascending secondary degeneration started. Erb and Schultze had reported a case of indubitable locomotor ataxia, in which the cord was examined microscopically, and in which the symptoms had disappeared almost entirely for some twelve years. He did not believe there was a cure on record, although it is unquestionable that many cases of great improvement had been reported, more especially among those with a history of syphilitic infection.

Dr. Gray narrated a case of his own, illustrating the association of locomotor ataxia with general paresis, the mental hebetude of the latter disease causing an apparent improvement in the former.

Dr. Dana said that we had changed our conceptions as to the variations in clinical types and as to the pathological lesions of locomotor ataxia. Probably ninety per cent. of our cases are typical and answer to the classic descriptions of the disease, but there is a minority of cases which have non-typical manifestations, types with optic atrophy, latent, spinal and spatic symptoms, with peripheral lesions, etc., and the prognosis varies in these forms. For instance, in the spatic variety the prognosis is not bad, but exceedingly so where there is rapid emaciation of the lower extremities. He had recently examined his notes, and the results of treatment in 56 cases, which were as follows:

10 very much improved (3 syphilitic);
6 improved (4 syphilitic);
14 stationary (3 syphilitic);
13 progressive (6 syphilitic); 2 fatal;
10 doubtful, or unknown.

He believed locomotor ataxia to be a degenerative disorder, affecting nerve fibers primarily, not beginning at a single focus, but at different places at various times, and to cure the disease we should have to discover a drug which would stop this degenerative process. As to suspension, he had tried it in twenty-two cases, with six hundred suspensions, since last April. Of these, four were much improved, six improved, six unimproved, and six discontinued the treatment.

Dr. Birdsall coincided with the speaker in the opinion expressed as to the incurability of the disease. In one of his own cases, a syphilitic, ataxia had disappeared for nine years, although the patient now suffered again from various crises, gastric and laryngeal, and some cerebral symptoms. For five years the active symptoms had been referred to the trunk and upper extremities. He had seen other very similar cases, and could speak of none as cured.

He had tried suspension in a few cases, with no favorable results, though he did not deem it wise to cast it altogether aside.

He had seen injurious effects from large doses of potassic iodide, and, in his opinion, tabetic cases could not tolerate this drug as well as others.

Dr. Starr said, with regard to the differential diagnosis between peripheral and cerebral cases, we first judge from the order in which the symptoms occur, as well as from the symptoms themselves, which in the former class developed more rapidly than in the latter.

Some seven years ago, Dr. Austin Flint read a paper in this Academy upon the self-limitation of phthisis, and a description similar to his might apply to locomotor ataxia. It is possible that the sclerosis of the cord may be a protective process, an effort of nature to arrest or provide against the effects of disease; indeed, a pathologist of this city has taught for two years that connective tissue is always thrown out by nature as a defense. Thus locomotor ataxia might be a self-limited disease like phthisis in a few instances.

His own records showed 25 cases seen in the last four years, 17 of which are carefully detailed. In 9 of the 17 there had been various periods of non-progression, while in 8, with similar treatment, there had been steady advance. He thought specific treatment worthy of trial in patients with a syphilitic history, but he had little faith in its efficacy, as in his experience it afforded less benefit in locomotor ataxia than in other specific nervous affections. He usually employed the English treatment—small doses of arsenic and biniodide of mercury.

Among 13 patients treated by suspension at the Vanderbilt Clinic, tabulated by Dr. Peterson, there were 7 cases of locomotor ataxia. In two cases only had there been distinct improvement, and none at all in 4, while in 2 the results were injurious, the suspension producing syncope, nausea and vomiting, severe pain, and enuresis at different times.

Dr. Sachs had observed in two cases the disappearance of the cardinal symptoms of locomotor ataxia, without treatment. The first was as follows:

B. L., merchant aged forty-eight, seen August 18, 1886. His symptoms were retching, dizziness, numbness of arm, unsteadiness in walking, absence of knee-jerk, slight swaying with closed eyes, and a feeling as though his drawers were too tight around the waist. Dr. Sachs had made the diagnosis of tabes incipiens, though with some hesitation, for the general condition of the patient was very good.

After two months a slight knee-jerk had returned on the right side, and later the left was recovered. Three years had now elapsed since the observation of these symptoms, and the man was in perfect health at the present day. He believed it to have been a functional derangement of the cord, due to overwork.

In syphilis a simple specific spinal meningitis might simulate a posterior sclerosis, and should be borne in mind when cases improve under treatment.

Suspension he had found unsatisfactory in ataxia, but in spastic cases, such as myelitis, it seemed to him of more use.

Dr. Waitzfelder had used suspension in a case of spastic paraplegia, which became worse, but he had noted considerable improvement in gait in several ataxics who were subjected to this method of treatment.

Dr. Gray then closed the discussion. He said that Fournier's and Rumpf's specific cases showed great improvement under treatment, but such had not been his own experience. He believed that in certain cases there would be great difficulty in distinguishing peripheral from central symptoms. As to self-limitation, mentioned by Dr. Starr, he saw no analogy between tabes and phthisis. In treatment he preferred to follow French authors and employ inunction in specific cases, rather than potassic iodide, for the results were better in his experience.

New York Academy of Medicine.

R. C. M. PAGE, M.D., CHAIRMAN.

Stated Meeting, October 15, 1889.

Dr. R. Jacobi read a paper on

CHRONIC PERITONITIS, WITH SPECIAL REFERENCE TO THE DIFFERENTIAL DIAGNOSIS OF SOME OF ITS VARIETIES.

Having enumerated a number of the causes of peritonitis, Dr. Jacobi said that perhaps the most frequent was a preceding attack. In autopsies upon cases of perityphlitis, he did not remember one without adhesions and other evidences of previous inflammation, and foreign bodies in the vermiform process were, in his opinion, seldom, if ever, a cause of the disease. Both enteritis and ulceration, acute or chronic, were also the causation in some cases, the inflammation extending by continuity; thus it was that a simple diarrhœa might become an enteritis and terminate in peritonitis.

Old local peritoneal adhesions over a cicatrized ulcer of the stomach or intestine, were soft and prone to rupture, and this was probably a frequent cause of acute peritonitis in persons apparently perfectly well. In diagnosis, chronic peritonitis was frequently overlooked, the intestines becoming glued together, or floating kidneys being fixed by adhesions without recognizable symptoms or signs. In chronic peritonitis, respiration was not necessarily accelerated, particularly if the inflammation was in the pelvis.

Vomiting was occasionally present, but perhaps not as frequently as in other conditions, and was often entirely absent even in acute peritonitis. Either constipation or diarrhœa might be present. A horizontal position might be painful, but this was also not infrequently the case in ordinary colic from accumulated gas, though in the former condition the patient was more likely to remain quiet than in the latter. Tumidity might be observed, but was often difficult to distinguish from the fat, which is so common in this situation, or from hysterical tympany, or distension from habitual constipation. The superficial abdominal veins were more frequently dilated in chronic peritonitis than in any other condition excepting certain hepatic diseases. Inspection might also show swellings, corresponding to intestinal convolutions, and palpation might reveal hard or soft exudation in the form of nodules or cakes, which consisted of organized lymph, thickened omentum, or a mass of intestines glued together. Fluctuation would indicate the presence of fluid more certainly than percussion duliness, which might be rendered uncertain by the presence of adhesions, retaining the distended gut between the abdominal walls and an accumulation of fluid. A chronic peritonitis may be sometimes discovered by placing the patient on his back, and having him alternately flex and extend his thighs; while doing this, pressure of varying depths is made by the physician, who may in like manner discover a painful area. In many cases, however, a better method is to make deep pressure with the fingers or palm, and on suddenly removing them a painful spot may be detected; the pain being caused by a sudden change in the position of the bowels. Every changed position of the intestines or other abdominal organs may cause pain: hence, in adhesions to the stomach, pain may be felt after a full meal; pain several hours later may indicate adhesions to the colon; pain on coughing, or quickened inspiration, a peri-hepatitis; pain at the end of micturition, a peri-cystitis. Pain, of varying degree and duration, was, in Dr. Jacobi's opinion, a very frequent symptom in chronic peritonitis. The seat of the pain would vary with the location and extent of the lesions. Extensive pelvic peritonitis might give rise to pain only during defecation, sexual intercourse, or micturition. The pain of peri-cystitis resembled that of vesical catarrh in coming on when the bladder was about one-half emptied, but differed in being more localized above the pubes, and more readily detected by pressure. In some cases the pain of chronic peritonitis could not be distinguished from that of flatulent colic; indeed, peritonitis by interfering with peristalsis may cause not only flatulence but twisting of the gut and stenosis.

The remainder of Dr. Jacobi's paper was devoted to the subject of tabes mesenterica. That there were several distinct varieties of this disease he thought was proven by the histories and symptoms of different cases. Besides the simple infiltrations of the mesenterica glands causing tabes mesenterica, chronic tubercular peritonitis would produce the same symptoms. Recognition of the latter condition was usually difficult, but in some cases it could be determined with certainty. Of course, in such the prognosis would be fatal; in others uncertain.

Dr. Francis Delafield spoke of the frequency with which chronic peritonitis arose for diagnosis, how many mistakes were made concerning it, and of its great importance. He divided the cases into three classes; those in which there were simple adhesions of connective tissue, those in which there were both adhesions and serous or purulent fluid, and the cases in which there was diffused thickening with fluid, but without adhesions. The first condition was often not detected until the autopsy. When in addition an enlarged liver existed, it was frequently confounded with tubercular peritonitis. Other conditions, from which it was difficult to distinguish this class, were irritable colon and dilated pylorus. The second closely simulated carcinoma and tubercular disease of the peritoneum. The third class was difficult to diagnosticate, not only from the latter conditions but also from cirrhosis of the liver.

Dr. William H. Thompson spoke of the remarkably low percentage of urea in the urine of patients with cancerous disease, as a point that might sometimes be of diagnostic value.

Dr. L. Weber said that he had never seen a case of chronic peritonitis that was not infectious in character. He did not look upon the cases mentioned by Dr. Jacobi as really cases of chronic, but of acute peritonitis and its results. Tabes mesenterica, he believed, was always a tubercular disease.

Selections.

The Effects Produced on Man by Subcutaneous Injections of a Liquid Obtained from the Testicles of Animals.

BY DR. BROWN-SEQUARD, F.R.S., ETC.

ON the 1st of June last I made at the Société de Biologie of Paris a communication on the above subject, which was published in the *Comptes Rendus* of that Society on June 21. I will give here a summary of the facts and views contained in that paper and in two subsequent ones, adding to them some new points.

There is no need of describing at length the great effects produced on the organization of man by castration, when it is made before the adult age. It is particularly well known that eunuchs are characterized by their general debility and their lack of intellectual and physical activity. There is no medical man who does not know also how much the mind and body of men (especially before the spermatic glands have acquired their full power, or when that power is declining in consequence of advanced age) are affected by sexual abuse or by masturbation. Besides, it is well known that seminal losses, arising from any cause, produce a mental and physical debility which is in proportion to their frequency. These facts and many others have led to the generally admitted view that in the seminal fluid, as secreted by the testicles, a substance or several substances exist which, entering the blood by resportion, have a most essential use in giving strength to the nervous system and to other parts. But if what may be called spermatic anæmia lead to that conclusion, the opposite state, which can be named spermatic plethora, gives as strong a testimony in favor of that conclusion. It is known that well-organized men, especially from twenty to thirty-five years of age, who remain absolutely free from sexual intercourse or any other causes of expenditure of seminal fluid, are in a state of excitement, giving them a great, although abnormal, physical and mental activity. These two series of facts contribute to show what great dynamogenic power is possessed by some substance or substances which our blood owes to the testicles.

For a great many years I have believed that the weakness of old men depended on two causes—a natural series of organic changes and the generally diminishing action of the spermatic glands. In 1869, in a course of lectures at the Paris Faculty of Medicine, discussing the influence possessed by several glands upon the nervous centers, I put forward the idea that if it were possible without danger to inject semen into the blood of old men, we should probably obtain manifestations of increased activity as regards the mental and the various physical powers. Led by this view, I made various experiments on animals at Nahant, near Boston, (United States), in 1875. In some of those experiments, made on a dozen male dogs, I tried vainly, except in one case, to engraft certain parts or the whole body of young guinea-pigs. The success obtained in the exceptional case served to give me great hopes that by a less difficult process I should some day reach my aim. This I have now done. At the end of last year I made on two old male rabbits experiments which were repeated since on several others, with results leaving no doubt as regards both the innocuity of the process used and the good effects produced in all those animals. This having been ascertained, I resolved to make experiments on myself, which I thought would be far more decisive on man than animals. The event has proved the correctness of that idea.

Leaving aside and for future researches the questions relating to the substance or substances which, being formed by the testicles, give power to the nervous centers and other parts, I have made use, in subcutaneous injections, of a liquid containing a small quantity of water mixed with the three following parts: first, blood of the testicular veins; secondly, semen; and thirdly, juice extracted from the testicle, crushed immediately after it has been taken from a dog or a guinea-pig. Wishing in all the injections made on myself to obtain the maximum of effects, I have employed as little water as I could. To the three kinds of substances I have just named, I added distilled water in a quantity which never exceeded three or four times their volume. The crushing was always done after the addition of water. When filtered through a paper filter, the liquid was of a reddish hue and rather opaque, while it was almost perfectly clear and transparent when Pasteur's filter was employed. For each injection I have used nearly one cubic centimetre of the filtered liquid. The animals employed were a strong and, according to all appearances, perfectly healthy dog (from two to three years old), and a number of very young or adult guinea-pigs. The experiments, so far, do not allow of a positive conclusion as regards the relative power of the liquid obtained from a dog and that drawn from guinea pigs. All I can assert is that the two kinds of animals have given a liquid endowed with very great power. I have hitherto made ten subcutaneous injections of such a liquid—two in my left arm, all the others in my lower limbs—from May 15th to June 4th last. The first five injections were on three succeeding days with a liquid obtained from a dog. In all the subsequent injections, made on May 24th, 29th, and 30th, and June 4th, the liquid used came from guinea-pigs. When I employed liquids having passed through Pasteur's filter, the pains and other bad effects were somewhat less than when a paper filter was used.

Coming now to the favorable effects of these injections, I beg to be excused for speaking so much as I shall do of my own person. I hope it will easily be understood that, if my demonstration has any value—I will even say any significance—it is owing to the details concerning the state of my health, strength, and habits previous to my experiments, and to the effects they have produced.

I am seventy-two years old. My general strength, which has been considerable, has notably and gradually diminished during the last ten or twelve years. Before May 15th last, I was so weak that I was always compelled to sit down after half an hour's work in the laboratory. Even when I remained seated all the time, or almost all the time, in the laboratory, I used to come out of it quite exhausted after three or four hours' experimental labor, and sometimes after only two hours. For many years, on returning home in a carriage by six o'clock, after several hours passed in the laboratory, I was so extremely tired that I invariably had to go to bed after having hastily taken a very small amount of food. Very frequently the exhaustion was so great that, although extremely sleepy. I could not for hours go to sleep, and I only slep very little, waking up exceedingly tired.

The day after the first subcutaneous injection, and sti more after the two succeeding ones, a radical change tool place in me, and I had ample reason to say and to write tha I had regained at least all the strength I possessed a goo many years ago. Considerable laboratory work hardly tire me. To the great astonishment of my two principal assistants, Drs. D'Arsonval and Hénocque, and other persons, was able to make experiments for several hours while standing up, feeling no need whatever to sit down. Still more one day (the 23d of May), after three hours and a quarter o hard experimental labor in the standing attitude, I wen home so little tired that after dinner I was able to go t work and to write for an hour and a half a part of a paper o a difficult subject. For more than twenty years I had neve been able to do as much. From a natural impetuosity, an also to avoid losing time, I had, till I was sixty years old, th habit of ascending and descending stairs so rapidly that m movements were rather those of running than of walking This had gradually changed, and I had come to move slowl up and down stairs, having to hold the baluster in difficul staircases. After the second injection I found that I ha fully regained my old powers, and returned to my previou habits in that respect.

My limbs, tested with a dynamometer, for a week befor my trial and during the month following the first injection showed a decided gain of strength. The average number o kilogrammes moved by the flexors of the right forearm before the first injection was about 34½ (from 32 to 37) and after that injection 41 (from 39 to 44), the gain bein from six to seven kilogrammes. In that respect the forear flexors re-acquired, in a great measure, the strength the had when I was living in London (more than twenty-si years ago). The average number of kilogrammes moved b those muscles in London in 1863 was 43 (40 to 46 kilogrammes).

I have measured comparatively, before and after the firs injection, the jet of urine in similar circumstances—*i. e.*, after a meal in which I had taken food and drink of the sam kind in similar quantity. The average length of the jet during the ten days that preceded the first injection was inferio by at least one-quarter of what it came to be during th twenty following days. It is therefore quite evident that th power of the spinal cord over the bladder was considerably increased.

One of the most troublesome miseries of advanced life consists in the diminution of the power of defecation. To avoid repeating the details I have elsewhere given in that respect, I will simply say that after the first days of my experiments I have had a greater improvement with regard to the expulsion of fecal matters than in any other function. In fact a radical change took place, and even on days of great constipation the power I long ago possessed had returned.

With regard to the facility of intellectual labor, which had diminished within the last few years, a return to my previous ordinary condition became quite manifest during and after the first two or three days of my experiments.

It is evident from these facts and from some others that all the functions depending on the power of action of the nervous centers, and especially of the spinal cord, were notably and rapidly improved by the injections I have used. The last of these injections was made on June 4th, about five weeks and half ago. I ceased making use of them for the purpose of ascertaining how long their good effects would last. For four weeks no marked change occurred, but gradually, although rapidly, from the 3d of this month (July) I have witnessed almost a complete return of the state of weakness which existed before the first injection. This loss of strength is an excellent counter-proof as regards the demonstration of the influence exerted on me by the subcutaneous injections of a spermatic fluid.

My first communication to the Paris Biological Society was made with the wish that other medical men advanced in life would make on themselves experiments similar to mine, so as to ascertain, as I then stated, if the effects I had observed depended or not on any special idiosyncrasy or on a kind of auto-suggestion without hypnotization, due to the conviction which I had before experimenting that I should surely obtain a great part at least of these effects. This last supposition found some ground in many of the facts contained in the valuable and learned work of Dr. Hack Tuke on the "Influence of the Mind over the Body." Ready as I was to make on my own person experiments which, if they were not dangerous, were at least exceedingly painful, I refused absolutely to yield to the wishes of many people anxious to obtain the effects I had observed on myself. But, without asking my advice, Dr. Variot, a physician who believed that the subcutaneous injections of considerably diluted spermatic fluid could do no harm, has made a trial of that method on three old men—one fifty-four, another fifty-six, and the third sixty-eight years old. On each of them the effects have been found to be very nearly the same as those I have obtained on myself. Dr. Variot made use of the testicles of rabbits and guinea-pigs.

These facts clearly show that it was not to a peculiar idiosyncrasy of mine that the effects I have pointed out were due. As regards the explanation of those effects by an auto-suggestion, it is hardly possible to accept it in the case of the patients treated by Dr. Variot. They had no idea of what was being done; they knew nothing of my own experiments, and were only told that they were receiving *fortifying* injections. To find out if this qualification had anything to do with the effects produced, Dr. Variot, since the publication of his paper, has employed similar words of encouragement, whilst making subcutaneous injections of pure water on two other patients, who obtained thereby no strengthening effect whatever.

I believe that, after the results of Dr. Variot's trials, it is hardly possible to explain the effects I have observed on myself otherwise than by admitting that the liquid injected possesses the power of increasing the strength of many parts of the human organism. I need hardly say that those effects can not have been due to structural changes, and that they resulted only from nutritive modifications, perhaps in a very great measure from purely dynamical influences exerted by some of the principles contained in the injected fluid.

I have at present no fact to mention which might serve to solve the question whether it would be possible or not to change structurally muscles, nerves, and the nervous centers by making during a good many months frequent injections of the fluid I have used. As I stated at the Paris Biological Society, I have always feared, and I still fear, that the special nutritive actions which bring on certain changes in man and animals, from the primitive embryonal state till death by old age, are absolutely fatal and irreversible. But in the same way that we see muscles which have from disease undergone considerable structural alterations regain sometimes their normal organization, we may, I believe, see also some structural changes not essentially allied with old age, although accompanying it, disappear to such a degree as to allow tissues to recover the power they possessed at a much less advanced age.

Whatever may be thought of these speculations, the results I have obtained by experiments on myself and those which have been observed by Dr. Variot on three old men, show that this important subject should be further investigated experimentally.—*Lancet.*

Treatment of Hypertrichosis.

BY ARTHUR JAMISON, M.D.

THE appearance of the patient was as follows: The whole right half of her forehead was covered, closely covered, with an overgrowth of long dark hair; some of the hairs being fully an inch long. The adventitious hair grew over the right eyebrow and eyelid, extended thence across the nose to the margin of the left eyebrow, and, upward, a little to the left of the middle line, to the margin of the hairy scalp. On the outer side it grew in a line from the external angle of the right eye to a little above the meatus of the right ear. The child's appearance was, as far as that side of her face was concerned, exactly like that of a Skye terrier. I deferred doing anything till the child was three months old, and in the interval thought over a good many of the plans advised to remove superfluous hair from the skin. I thought them all inapplicable in this case, and finally resolved to risk the trial of the one I now venture to suggest.

When applying sodium ethylate for the removal of nævi, I had noticed that when the nævus was near the hairy portion of the scalp, if any of it were let to run around its base, the effect was a loss of hair where the ethylate had touched. I tried the effect of the ethylate on several small hairy moles, and, finding the results to have been very satisfactory, I determined to try it in this instance. Accordingly the child was put very fully under the influence of chloroform, the long hair cut short in a vertical line down the forehead for the width of an inch, and sodium ethylate rubbed over the surface very freely and thoroughly, till the skin had an orange appearance. By the time the child had slept off the effects of the chloroform, the pain of the application had ceased, so that the child was fairly comfortable. A little cold cream was then applied.

At the end of a fortnight the result of this first attempt was seen, and most satisfactory it was. The hair-follicles over the greater part of where the application had been made seemed destroyed, and a whitish skin remained. Curiously enough here and there some long hairs remained uninjured. At the end of a month I tried again, but this time I attacked the surface of the forehead from the eyebrow upward, leaving the hairs of the eyebrow alone. The result was the same. Next time I applied the caustic from the margin of the eyebrow to the ear. Then I waited some time to see the result. When the child was a year old the forehead was fairly clear of hair; but the eyebrow and eyelid were still covered with long hair, and that from the eyelid was growing over the eye. I now very carefully applied the ethylate over the eyelid. There was, as might have been anticipated, a good deal of subsequent œdema of the lid, but it all passed off very nicely. The eyebrow now remained, and this I very lightly rubbed over with the ethylate, but this slighter application seemed to have no effect. A second attempt, however, was more successful, for whilst it did not destroy the hairs entirely, a new growth of weaker, shorter, and much finer hair sprung up. The subsequent progress of the case was slow. It consisted in touching from time to time the hair-follicles that had not been fully destroyed by the previous applications. The child, a healthy girl, is now over six years old, and the mother writes to me that there is now no disfigurement, the skin being hairless, smooth and nice-looking.

I wish to add, in conclusion, my conviction of the superiority of sodium ethylate in the treatment of hairy moles over any other method of treatment. That by electrolysis is often painful, always tedious, and only applicable for limited hypertrichosis, such as that on the lips or chin. In the case of moles where we want not only to remove hairs but also the discoloration of the skin as well, the use of the ethylate has given me better results than the application of any other agent.—*Practitioner.*

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DIVIDING THE RESPONSIBILITY.—Doctor—"Yes, you have a tremendous fever. Burning thirst, I suppose?" Patient—"Yes, terrific." Doctor—"Ah, I'll send you round something to relieve that." Patient—"Never mind about the thirst, Doctor. You look after the fever; I'll attend to the thirst myself."—*London Pick-me-up.*

A Plea in Favor of Early Laparotomy for Catarrhal and Ulcerative Appendicitis, with the Report of two Cases.

BY N. SENN, M.D., PH.D., OF MILWAUKEE, WIS.

Professor Principles of Surgery and Surgical Pathology in the Rush Medical College, Chicago, Ill.

THE literature of the surgical treatment of affections in the ileo-cæcal region has been increasing very rapidly during the last few years. A great deal has been said and written concerning the propriety of surgical interference in cases of perforative appendicitis, typhlitis, paratyphlitis and perityphlitis. Post-mortem examination and clinical experience have demonstrated that with few exceptions localized and diffuse peritonitis as well as suppurative inflammation of the connective tissue originating in the ileo-cæcal region, are caused by an antecedent affection of the appendix vermiformis, which has resulted in perforation or gangrene of that structure. While it can not be said that unanimity of opinion exists among surgeons in reference to the exact indications for operative treatment in cases of appendicitis and suppurative perityphlitis, it is safe to assert that the majority of them would not hesitate to resort to the knife in every instance where it would be possible to ascertain beyond a doubt that perforation had taken place. Numerous cases have been reported during the last three years where prompt action on part of the surgeon has been the means of saving life in cases of phlegmonous inflammation and circumscribed peritonitis caused by perforation of the appendix vermiformis; but, on the other hand, many laparotomies for diffuse peritonitis due to the same cause proved powerless as a life-saving measure, because the direct invasion of the peritoneal cavity had given rise to a diffuse septic peritonitis alike beyond the reach of medicinal and surgical measures. The principal object in writing this paper is to call the attention of the profession to the necessity of treating the primary disease of the appendix by radical measures before the advent of incurable complications, that is, before disease due to perforation has occurred. I believe that in many cases the development of perityphlitis is preceded by a well-marked complexus of symptoms pointing directly to the existence of appendicitis. Many patients suffer from well-defined symptoms indicative of the presence of an inflammatory lesion of the appendix for months and years before it gives rise to a perityphlitis or perforative peritonitis. It is of the greatest practical moment to recognize the exact condition in time, and to anticipate the dangerous and only too often absolutely fatal complications, by removing permanently the source of danger, which can be done at this time with comparative ease and almost perfect safety by the extirpation of the appendix.

The following cases will serve to illustrate the correctness of these assertions:

Case 1.—J. S., twenty-two years of age, clerk by occupation, came under my observation during the last week in April, 1889. He consulted me at my office, and informed me that during the last fifteen months he had suffered from five attacks of what his physician called perityphlitis. Each attack was attended by excruciating pain in the ileo-cæcal region, vomiting and constipation, and usually lasted from one week to twelve days. During the intervals he was able to follow his occupation, but never quite regained his former health. The treatment consisted of rest in bed and opiates. Between the attacks the bowels moved regularly, and the patient was free from pain. At the first examination I found the temperature 99.2° F., pulse 80, tongue heavily coated. Patient somewhat emaciated and pale. Pain was referred to the ileo-cæcal region, and directly over the location of the appendix vermiformis a circumscribed area of tenderness could be mapped out. Palpation and percussion failed to show any appreciable swelling, but on deep pressure while the patient's chest was elevated and thighs flexed, a firm cord-like body could be felt behind the cæcum over a point corresponding to the location of the appendix vermiformis. No tympanites or any other symptoms of peritonitis were present. I was satisfied of the existence of appendicitis from the history of the case and the symptoms and signs presented, and feared that during this or subsequent attacks perforation with all its uncertain consequences might take place. In view of the probability of such an occurrence, I advised a radical operation as the only means calculated to afford permanent relief. The patient had suffered so severely during the five preceding attacks that he readily consented to the proposed operation. During this attack he was confined to bed only at times, and took opiates as required for the pain. As the symptoms did not subside he was not admitted into the Milwaukee Hospital April 30, for the purpose of having the appendix removed. A saline cathartic was administered the day before operation, and the following morning the colon was evacuated by a copious enema. The evening before operation the abdomen was shaved and thoroughly cleansed with warm water and potash soap, after which a compress wrung out of a sublimate solution 1:2000 was applied.

Operation May 1: Chloroform anæsthesia. After removal of the compress the surface was washed with undiluted alcohol. An incision about four inches in length was made directly over the center of the cæcum and parallel to the ascending colon, the lower angle of which reached to within an inch of Poupart's ligament. All hemorrhage was carefully arrested before the abdominal cavity was opened. The peritoneum was divided between two anatomical forceps, when two fingers of the left hand were introduced, and between them the opening was enlarged. Through this incision the cæcum came directly in view, and presented a normal appearance both as to size and structure. No evidences of peritonitis or perityphlitis. On making pressure over the lower portion of the cæcum an elongated body about the thickness of an ordinary lead pencil could be distinctly felt rolling under the tip of the finger. The lower margin of the cæcum was grasped with the fingers, elevated, and brought into the wound. This manipulation brought into view the appendix which was directed upward and inward from its point of attachment, along the posterior wall of the cæcum. No adhesions between the appendix and the cæcum, but the mesentery of the appendix appeared to be shortened and exceedingly vascular. The peritoneal covering of the appendix appeared healthy, having retained its normal smoothness and lustre. The appendix was uniformly enlarged from its junction with the cæcum to its distal extremity, and imparted a sensation of unusual hardness when grasped between the thumb and index finger. The mesentery of the appendix was ligated in several sections with fine silk and cut close to the appendix. The appendix was ligated near the cæcum with a silk ligature, and amputated about a quarter of an inch below the point of ligation. The lumen of the appendix at the point of section was quite small, but as it was more than probable that it communicated with the cæcum, I deemed it necessary to prevent the possibility of a subsequent perforation from cutting through of the ligature by covering the stump with peritoneum. The stump was disinfected, dusted with iodoform, and buried by stitching the peritoneum from each side over it by a number of stitches of the continued suture. The cæcum was now returned and the wound closed by suturing the peritoneum with catgut, while the external sutures of silk were passed down to, but not through, the peritôneum. A compress of iodoform gauze and a thick layer of salicylated cotton retained by a number of strips of adhesive plaster encircling two-thirds of the body constituted the dressing. The subsequent history of the case was one of uninterrupted recovery. The pain disappeared as if by magic. The patient took no opiates after the operation. Temperature never above normal. On the third day the bowels were moved by a saline cathartic, after which no further medication was necessary. At the end of a week the dressing was removed, when the wound was found united throughout, and the sutures were removed. At the end of the second week the patient left the hospital, and in the course of another week resumed his occupation. He is now in perfect health, has gained in flesh, and has been perfectly free from pain. The amputated appendix proved to be a very interesting pathological specimen. The part removed measured two inches in length, and in thickness corresponded in size to the last joint of the little finger. The lumen was uniform in size throughout and was large enough to admit a small-sized lead pencil. The appendix was slit open its whole length at a point opposite to the mesenteric attachment. On inspection of the mucous membrane lining it an oblong ulcer was discovered near the middle and opposite the mesenteric attachment. The ulcer measured about half an inch in length, and a quarter of an inch in width, its greater diameter corresponding to the long axis of the appendix. The margins of the ulcer were regular in outline and not undermined. It presented no evidences of repair. Its greatest depth corresponded to its center. The whole mucous membrane was exceedingly vascular and much thickened, the submucous infiltration being uniform over its entire area. A transverse section of the appendix through the center of the ulcer, examined under the microscope, showed that the entire thickness of the mucous membrane and part of the muscular coat were destroyed by the ulcerative process, and that the remaining thickness of the wall as far as the peritoneum was infiltrated with embryonal cells and leucocytes which were closely grouped together in the connective tissue reticulum. The submucous tissue and part of the muscular coat were similarly infiltrated throughout. No fæcal matter and no foreign body could be found in the lumen of the appendix; the whole contents consisted of a few drops of a highly viscid, odorless secretion. The absence of any macroscopical cause of the inflammation, the condition of the mucous membrane, and the appearance of the ulcer, substantiate the diagnosis of catarrhal appendicitis, which in this case had resulted in the formation of a catarrhal ulcer of considerable size and depth. There can be but little doubt that repeated acute exacerbations of the chronic inflammation would have finally resulted in perforation, and as the ulcer was located on the free side of the appendix there would have been great danger in such an event of invasion of the peritoneal cavity, and death from diffuse septic peritonitis. The second case came under the observation of Dr. Knut Hoegh, of Minneapolis, Minn., and through his courtesy I am permitted to incorporate it in this paper. It furnishes an illustration of another form of appendicitis (suppurative) amenable to early successful surgical treatment.

Case 2.—H. M., thirty-seven years of age, merchant by occupation. For the last six or seven years he has suffered at intervals from attacks of pain in the abdomen. At first these attacks were not very severe, and of short duration, the general health remaining unimpaired. Questioned as to the condition of the bowels the patient stated that the attacks were usually attended by diarrhœa. The onset of pain was always sudden and apparently without any appreciable cause, as they often occurred during the night after the patient had retired the evening before in perfect health. In the beginning the attacks occurred about every six months, but later they came on more frequently, more severe, and of longer duration, and at the same time the general health became impaired. The later attacks he describes as commencing with a severe pain in the ileocæcal region, which at times became excruciating, accompanied by sensations of chilliness. No vomiting, but more or less retching; bowels constipated; abdomen often distended and always tender on pressure over a limited space, at a point from which the pain always seemed to start.

Patient is not aware that he ever passed blood, mucus or pus with the stools. During the last fifteen months he has passed through five attacks, the last one two months befo the operation was performed. Since the last attack he h been unable to resume his business, as he has suffered co stantly from pain and tenderness in the ileo-cæcal regio loss of appetite, and an increasing debility. The patie looks prematurely old, showing evidences of senile mara mus seldom found in persons of his age. He is of mediu height, somewhat emaciated, having lost twenty-five poun of his customary weight. Examination of the abdom revealed no tympanites and no swelling, but midwa between the umbilicus and right anterior superior spine the ilium a space about two inches square was found tend on pressure. Rectal exploration yields a negative resul The usual internal treatment in such cases, consisting of t administration of belladonna, nux vomica, and alkali cathartics, was not followed by any material improvement, that the patient readily consented to an operation which h for its object the removal of the appendix vermiformis, whi it was believed was in a condition of catarrhal inflammatio The absence of swelling and fever seemed to render it i probable that the symptoms were due to circumscrib peritonitis, or inflammation in the cæcal mesentery or par cæcal connective tissue. The repeated attacks of pain, t localized tenderness, and the digestive disturbances point to a localized inflammation depending upon some chron pathological change within or near the appendix vermiform Dr. Foster, of Minneapolis, saw the case in consulation wi Dr. Hoegh, and concurred in the opinion that an operati should be performed. The writer was consulted by lette and strongly urged the propriety of a speedy resort to su gical treatment. The operation was performed by D Hoegh, in the St. Barnabas Hospital, August 19, 1889, a sisted by Drs. Foster and Wood. Chloroform was used an anæsthetic. Operation performed under strict antisept precautions. Incision through right linea semilunaris. C opening the peritoneal cavity the appendix came at once sight lying, free in the peritoneal cavity, pointing toward t pelvis. It was about two inches in length, remarkably fi to the touch, and its serous surface quite vascular. some points it had formed adhesions with the surroundi structures. The adhesions were separated and a ligatu applied near its junction with the cæcum. The stump w buried in the same manner as in case 1. The cæcum show nothing abnormal. It was noticed that the point of co munication between the appendix and cæcum was very narrow, the lumen not exceeding the size of a knitting needle. The abdominal incision was closed in the usual manner. Soon after the operation the patient suffered considerably from nausea and retching, which gave rise to considerable pain in the wound. A slight elevation in the temperature a few days after the operation announced a slight suppuration in the superficial portion of the wound, which, however, soon subsided, and the healing by granulation proceeded in a satisfactory manner. Aside from this disturbance the patient went on to an uninterrupted and permanent recovery. Examination of the appendix after this removal showed that it was somewhat distended in its central part by a few drops of a thick, very offensive, purulent fluid of the consistency of cream, of a brownish color; the odor was not feculent, but rather fœtid. No concretion or foreign body was found. The mucous lining of the appendix showed distinct but not very deep ulcers, both involving the entire thickness of the mucous membrane. The ulcer nearest the cæcum was the largest, occupying the whole circumference of the lumen about one-quarter of an inch wide. The second ulcer nearer the apex was not larger in circumference than the size of a split pea. The serous coat near the junction of the cæcum was considerably thickened. Microscopical examination of the fluid showed broken down tissue, pus corpuscles and pigment granules.

GENERAL REMARKS ON EARLY RADICAL OPERATION FOR APPENDICITIS.

Excision of the appendix in cases as reported above must be considered in the light of a curative and prophylactic operation. It is curative, as by it the cause of the disease tissues is completely removed, and it is prophylactic, as by it the disastrous consequences of a probable later perforation are positively prevented. Extirpation of the appendix at a time before the inflammation process has reached the serous coat is one of the easiest and safest of all intra-abdominal operations. The operation is performed in a healthy aseptic peritoneal cavity, and if the customary antiseptic precautions are carried out, healing of the visceral and abdominal wounds by primary intention may be confidently expected. The operation eliminates a structure which if not entirely useless has at most only an unimportant physiological importance. —*The Journal.*

(*To be Continued.*)

Jaborandi and Pilocarpine in Bright's Disease.

BY P. R. EGAN, ASSISTANT SURGEON, U. S. A., EAGLE PASS, TEX

The leaves of Pilocarpus pinnatus have been used to produce sudorific effects for centuries. The alkaloid has been before the profession for the last twelve years. Nevertheless, the truth of a recent statement will be readily admitted. Willoughby says (*The Lancet*, May 25, 1889): "There are few drugs of which the physiological action is so direct and palpable, but of which the therapeutic uses are so undetermined."

In the discussion which followed the reading of Dr. C. S. Wood's paper on "Some Points in the Treatment of Chronic Albuminuria, or Bright's Disease" (*The Medical Record*, March 24, 1888), pilocarpine was mentioned by but one speaker. Dr. Page's faith in the drug was not of a very exalted nature. "Pilocarpine," he added, "has been recommended for the purpose of eliminating this so-called uræmic poison. The chief objections to this remedy are its depressing effect upon the heart, and sometimes it causes such a profuse salivary secretion that the patient almost strangles." So, too, Heither, of Vienna: "He had never seen any good result follow the use of pilocarpine in renal diseases after ascites had once set in. He admitted that it produced its physiological effects of increased perspiration and urination, but believed these to be purely temporary, and to have no beneficial result; whereas the depression consequent upon the use of the drug was not seldom alarming."

Before the New York Academy of Medicine (*Birmingham Review*) Dr. Francis Delafield brought forward a paper on the "Treatment of Acute and Subacute Nephritis" (*The Medical Record*, March 23, 1889). It was discussed by seven representative physicians of that great medical centre. But one referred to the use of pilocarpine—in truth, the remedy was almost ignored.

On the other hand, the general concensus of recent authorities on materia medica is that expressed by Stille ("National Dispensatory"): "When dropsy arises in connection with desquamative tubular nephritis (especially scarlatinous), or even with interstitial nephritis, the medicine is very efficient; in the former case often leading to a cure, in the latter to a prolongation of life.

From Professor Wagner's clinic at Buda-Pesth comes the following: "When used according to the above-mentioned principles (*quod vide*), pilocarpine will be found in most cases of Bright's disease, even when hot baths and other diaphoretics prove useless, always to diminish dropsy to such an extent that the patient is more or less protected against dangerous uræmic suffocative attacks. In this way it may be possible to obtain a relative cure; that is, in secondary granular contracted kidney" (*British Medical Journal*).

In *The Lancet* for December 22, 1888, J. G. Marshall, B. A., M. B., Cantab, writes: "The value of jaborandi and its derivatives in the treatment of the dropsy of Bright's disease can not be overestimated. By its use I have relieved in several cases some of the most distressing features of this complication, and prolonged or rendered less painful the termination of life in others, but in none has the drug been exhibited with such satisfactory results as in the following case." Mr. Marshall then details the history of a fisherman, aged nineteen, who contracted Bright's disease, for which he was unsuccessfully treated at home and in hospital. When he again saw him "his face was livid, and the swollen condition of the cellular tissue of his neck made it almost as broad as his shoulders. He coughed incessantly; there was copious intra-thoracic effusion, and the subcutaneous tissue all over the chest was 'doughy' to the touch. His abdomen was as big as a barrel, and there was extensive œdema of the genitals. His legs and thighs were enormously swollen, and water was exuding from them. He was passing a small quantity of urine, which was of a dirty color and loaded with albumen." Mr. Marshall treated him with hypodermic injections of one-fourth of a grain of pilocarpine hydrochlorate. In a fortnight he was relieved of his dropsy, and passing his usual quantity of urine, which still contained some albumen. Mr. Marshall adds: "I think the almost miraculous improvement which followed the use of the pilocarpine is worthy of recording, and (when one considers the usual helplessness of a condition such as I have described in a patient of this age, and from such a cause) that jaborandi and its alkaloids must occupy the first place among therapeutic agents in the treatment of cases of this kind."

Although we may not agree with the statement of a recent authority that in puerperal eclampsia "nephritis is usually, if not always, present" (B. Holmes: *Medical News*, September 14, 1889), still it is sufficiently akin to acute and

subacute Bright's disease to merit our consideration. Here, too, the same ambiguity prevails. The London Obstetrical Society cordially indorsed the opinion of Dr. John Phillips, that "although good effects were produced in twenty-eight cases, yet in nine such dangerous symptoms manifested themselves that he was bound to warn others against its use, especially when coma was pronounced" (*The Lancet*, October 13, 1888).

On the other hand, *The Lancet* for 1885 and 1886 contains an account by Dr. Horrocks, of Guy's Hospital, of two very severe cases treated successfully by the injection of one-third of a grain of pilocarpine, repeated to obtain its physiological effects. Cessation of convulsions almost immediately followed the use of the injection; the os rapidly dilated, and the children were quickly expelled, but did not survive. The maternal mortality is generally thirty per cent. A recent writer, however, gives twenty-three cases and no death (*The Medical Record*, September 7, 1889). *The Lancet* for 1886 also contains an account of five cases equally happily treated by Dr. Murphy, with similar injections of pilocarpine. One case so treated by him had thirty-three convulsions in the seventh month of pregnancy, but was afterward successfully delivered at term of a living child.

The writer desires to add two cases to the contribution of Mr. Marshall—one almost similar to his, but in which the result obtained by the use of jaborandi was better; the other a well marked case of acute Bright's disease, with total loss of vision, which was restored in one hour and a half by the use of pilocarpine. Jaborandi and pilocarpine would seem to be especially indicated in all forms of Bright's disease. Its sudorific effect promptly eliminates the poison pent up in the system. Its well-known power of relaxing nervous tension in status epilepticus and kindred conditions (S. B. Lyon, *Journal of Nervous and Mental Diseases*, April, 1889; Willoughby, *ut supra*) is of the greatest service when eclampsia is threatened, or convulsions have already taken place. In a five years' experience (1882 to 1887) with jaborandi and pilocarpine in large doses, we have never seen, among non-debilitated subjects, any worse results than emesis, which at one time or another has attended almost every drug we have used. In Case I., instead of increasing the œdema of the lungs as it is said to do, it relieved it after other remedies had failed.

Case I.—J. R. ——, colored, aged twenty-four. Was seen on April 27, 1885, when he gave the following account of himself: About three months ago he began to swell in his legs and abdomen. Found that he could not easily button his "pants." Says he has never had any venereal disease, but has been a hard drinker. That two nights since, while camping in the valley, with insufficient covering, he suffered very much from cold. That he then began to cough, and rapidly to swell up.

Has anasarca of legs and body as high as his neck. His genitals and abdomen are very much swollen. A percussion wave can not be obtained, but there is dullness on the flanks, changing with change of position. His heart is normal, but beats rapidly—one hundred and twenty per minute. Over his lungs are heard sibilant râles, and fine crepitation, but no dullness. He coughs almost constantly, and ejects mouthfuls of serous fluid. Says he has passed scarcely any urine during the last two days. A sample obtained is very dark colored, and became almost solid on heating. Under the microscope it was found to contain blood-corpuscles and granular casts. There were no nervous symptoms. Suffers from constipation. He was given pulvis purgans, acetate of potash in infusion of buchu and digitalis, and Stokes' mixture for cough. He passed about twenty ounces of urine each day, until May 1. The albumen was slightly diminished, but otherwise there was no change. He was then given, morning and evening, ext. jaborandi, fl. ʒ j.; aq. menth. pip. ℥ j. Sig: To be taken at a dose; repeat in one hour if sweating is not produced. This dose produced its physiological effect without causing emesis. Pulvis purgans and Stokes' mixture also continued.

Next day there was a slight improvement.

On May 5th the following note was entered: Much better. Only few crepitant râles over lower part of chest. Œdema only noticeable over sternum. Passep thirty-four ounces of urine of light color; sp. gr., 1.015. No albumen or casts. On the following day it was noted—swelling gone from over chest. His recovery was uninterrupted. Ten days later he was given Basham's mixture alone, and in the first days of July he resumed his ordinary occupation. Seven months afterward, when last seen by me, he was found to be slim, wiry, and in excellent health. There never had been any return of his œdema, and albumen had not been detected after May 5th.

Case II.—M. G——, aged twenty-eight. Was seen December 24, 1888. He had been suffering from sore throat for two days prior to seeking medical aid. Tonsils very much swollen and filling almost the entire pharynx. There is marked difficulty in swallowing, and some slight fever present. He was treated by ammoniated tincture of guaiac, aconite, and steam inhalations. On December 30th an abscess of the right tonsil was evacuated, all medicine discontinued, and a gargle of boric acid in hot water directed. He progressed favorably until January 10, 1889. On the morning of that date he complained of severe headache, and his face appeared swollen. This was thought to be due to a severe cold. During the forenoon he vomited twice—the vomited matter being bile-stained. About midday he fell into a sleep which lasted a couple of hours. At 3 P. M. he was assisted to the chamber, and then discovered that he was unable to see. He wanted to be told whether it was night or day. On my arrival I found him talking incoherently. His legs and face were sufficiently swollen to leave a slight depression when firm pressure had been applied. His headache was very severe, and he was unable to distinguish daylight. A small quantity of urine obtained at the time gave a deposit equal to about two-thirds of its volume. He was given one drop of croton oil in glycerine, but this was soon rejected. A rectal injection of one drachm of glycerine, repeated in twenty minutes, produced a slight watery evacuation. A hypodermic injection of one-sixth of a grain of pilocarpine hydrochlorate produced a free perspiration, beginning ten minutes after its administration and lasting nearly an hour. In one hour and a half he could distinguish the faces of those around him, and at 7 P. M. he could distinguish a light about one hundred yards away. His urine under the microscope was found to contain granular tube-casts. The pilocarpine was again injected at 8 P. M., and produced a free perspiration.

January 11.—Passed a small quantity of water twice during the night. Vomited twice. Swelling has gone from the face, and almost wholly from the lower limbs. Can see everything about him, but distant objects seem misty. Passed twenty ounces of urine, containing about one-third albumen and some casts, during the last twenty-four hours. Was given one drop of croton oil in glycerine, which acted freely. Pilocarpine injected night and morning. His recovery, from this point, was uneventful. He was given the pilocarpine night and morning until January 13th, when he passed thirty ounces of urine containing no albumen or casts, and having a specific gravity of 1,022. It was then injected once a day until January 15th, when he passed fifty ounces of normal urine. The swelling had all disappeared, and he expressed himself as feeling quite well. Seven months afterward I learned that he successfully passed the physical examination required for one of the government services.—*Medical Record.*

Fons Vitæ.

This time it is not Ponce de Leon seeking among the Bahama Islands but failing in his search after the fountain of perpetual youth, flowing from the bowels of the earth, nor the Witch Canidia (whom Horace describes) converting the bruised flesh of fiery Roman steeds of the amphitheater into life-giving draughts, but a French *savant* of the Academie, our venerated and venerable *confrere directeur de l'Archives de Physiologie* and president of the Biological Society, who has found the fountain of rejuvenescence in *fluida seminalis canina—fons et origo vitæ;* and the announcement is gravely made by the venerable master in physiology, and facts indisputable are given by him to prove the rejuvenating power, at least for a time, of the new found essence of-life—a power which "can confer * * * long life, give * * victory * * * in eight and twenty days (even in eight and twenty hours or less) * * * make an an old man * * * a child." Thus excelling Ben Jonson's alchemist.

"You knew me six months since [says the Parisian *savant*]. I was old, broken down, my mind even enfeebled; my sphincters had lost their strength; I was slowly drifting into senility, that which is not surprising, since I was born in 1815. Look at me to-day. My eye is brilliant, my words are clear cut and distinctly uttered, my intelligence is brighter than ever. I work in my laboratory twelve hours daily, and I am not weary at night. *Mes sphincters fonctionnent merveilleusement, le jet de mon urine n'a rien a envier au plus vigoureux des garcons: en un mot j'ai retrouve mes vingt ans.*"—*Societe de Biologie*, June 1, 1889.

Guided by the views and experiences of the past, expressed as far back as 1869, in his lectures and the special experiments of 1875, when he restored an old dog to comparative youth, he has this year repeated these experiments on animals and upon himself, and announced the results above indicated with great confidence.

After subcutaneous injections of blood from the spermatic veins of a young animal mixed with the juice obtained by crushing its testicles with a little water, his muscular strength in great measure returned; intestinal atony from which he suffered disappeared and defecation became normal again; the bladder regained its contracility, as shown by the quotation above; mental exertion became easy again, and his youthful vigor returned.

When these remarkable *facts* were reported to the Paris Société de Biologie, some of the members threw doubts on the conclusions, and attributed the results to imagination.

And no serious announcement before the Societe de Biologie has ever been so facetiously received by its members. His colleagues of the Academie have made it the subject of jest, and whole pages of humorous reference have appeared in the medical press at the distinguished *savant's* expense. But there is something in the old physiologist's discovery nevertheless—there is life in the spermatic veins, just as there is power in gastric and pancreatic juices, and the truth is being made apparent by confirmatory experiments of others.

Dr. Variot has made a later communication to the Societe de Biologie, in which he gives details of three cases of weakness due to old age, treated by subcutaneous injections of a liquid extracted from the testicles of guinea pigs and rabbits, and the success was as great as in the case of M. Brown-Sequard himself.

Dr. Brown-Sequard also injected the liquids obtained from the other glands of the body, and he finds that that obtained from the lungs is toxic, that from the liver and kidney is indifferent, and that from the testicle salutary. He thinks also that the liquid obtained from the ovaries may be tried in weakness from old age in women, and is now making experiments to prove this point, and asks some of the lady physicians to try it on themselves.

The exalted position of M. Brown-Sequard entitles the most startling statements he may make to a respectful and considerate hearing.

The distinguished physiologist of France is not often misled or misleading, and his recent remarkable statements certainly can not be attributed to youthful enthusiasm, and they are assuredly not due to senile delusion, for, though advanced in years, he is neither in his dotage nor demented. We pin our faith still to the old *savant.* Physiology is still moving onward and upward.

The *Medical Record* of August 31st, published a report by Dr. Henry P. Loomis, of "An Experimental Study of the Brown-Sequard Theory," on the following observations confirmatory of Dr. Brown Sequard's experiments:

"I can see no reason to anticipate danger from the fluid prepared under proper antiseptic precautions, provided the material used be absolutely fresh and free from all traces of disease.

"My attention was called to the necessity in this last particular, by having discovered in specimens taken from an apparently healthy animal, a solitary tubercle in which were demonstrated tubercle bacilli. In none of the cases have I seen any bad results, and only in a few has there been a moderate amount of pain at the point of injection, lasting from six to eight hours.

"I can explain the singular nervous affection apparent in certain of the cases only upon the theory that upon the nerve centers the mixture exerts some powerful, but as yet unexplained, influence, which, even if its use be eventually proved beneficial in some cases, must render its employment to others a matter of caution. It is far from safe to say and proceed upon the belief that 'if it does no good, it does no harm.'

"I seem to see in almost all the cases of old men subjected to the experiment an increase in strength and vitality which certainly persists for several days. I have noticed nothing in the least resembling the secondary depression which so commonly follows the use of ordinary stimulants.

"When used in cases of actual disease, no modification of pathological conditions or processes has been recognizable.

"I therefore conclude:

"That the injection of this mixture does, as claimed, produced 'nutritive modification' in the tissues of elderly men, due probably to the stimulation of the nerve centers.

"As far as my own experiments are concerned, sufficient time has not yet elapsed to justify an affirmation or denial of the correctness of Brown-Sequard's second conclusions.

"There is in the theory sufficient ground for further experiment."

If we but reflect a moment upon the richness of the semen in chemico-physiological nutrients, the reconstructive proteids of which it is composed, it is not strange that its hypodermic employment or the subcutaneous injection of extractives from it, as has been suggested by a well-known laboratory of this country, should show rejuvenating results; and from this fact alone, aside from Brown-Sequard's authority and established credibility as a physiological experimenter, are we prepared to accept with credence the strong statements of the *savant* of the Biological Society, though received with astonishment and doubt in so many quarters. Under the record we are disposed to write *Credo*, for Brown Sequard has said it.—*Alienist and Neurologist.*

Gleanings.

DIARRHŒA AND SALICYLATE OF BISMUTH.—In the *Meditz* (Lond. *M. Rec.*, Aug.) Dr. S. Mikhailoff warmly recommends the treatment of obstinate chronic diarrhœa by salicylate of bismuth, in six grain doses, given thrice a day. He adduces, for the sake of illustration, a striking case of a gentleman, aged fifty-five, who had been suffering from and been treated for diarrhœa since he was twenty-five, when he had had an attack of Asiatic cholera. After all possible means had been successfully tried in vain (by numberless doctors of 'several generations') the administration of the salicylate was followed in a week by a marked improvement, and in a few weeks by permanent cure (about one and a half years passed since the disappearance of his diarrhœa).

Druggist—"What's the matter with you? You seem excited."

Clerk—"Heavens! I sold Mrs. Smiley strychnine instead of potash."

Druggist—"Well, if you aren't the most careless idiot I ever saw. You seem to have no idea of the value of strychnine."

DIPHTHERIA TREATED WITH SULPHUR AND QUININE.—Dr. Burghardt has been making, for seven years, experiments in the cure of diphtheria by blowing a mixture of sulphur and quinine in equal proportions into the larynx, on the tonsils, into the nasal cavity and into the pharynx. These applications are made thrice every day, and nothing must be taken for two hours afterward; spitting must also be avoided. The powder is odorless, and does not produce any disagreeable symptoms. Immediately after the application the patient is quieter, fresher, the fever ceases, the feeling of weakness leaves him. The applications are continued after all symptoms have disappeared. Burghardt has not met with a single failure. Of thirty-three cases, some of which were very dangerous, not one terminated fatally. Time of cure, two weeks.—*Wiener Med. Wochenschrift, J. A. M. Asso.*

DIURETIC ACTION OF SALICYLIC ACID.—Dr. Huber (*Gaz. Hebd de Med.*, *M. Rec.*, September 21), in twenty-five cases of rheumatism, noted augmentation of the urinary secretion after administration of the acid. He found the quantity of urine to increase in the twenty-four hours from sixteen to twenty-three ounces. Similar results were noted in cases of pleurisy. The diuretic dose of salicylic acid was about ten grains every three hours, until forty-five grains per day were administered. The diuresis augments from the first day, and continues on the following days. Huber would not advise the employment of this remedy in typhoid fever, and still less in the course of nephritis; in fact, he would restrict its use to cases of simple pleuritic effusion.

"Lame! lame!" sighed Mrs. Partington. "Here I have been sufferin' the bigamies of death for three mortal weeks. First I was seized with the bleeding phrenology in the hampshire of the brain, which was exceeded by the stoppage of the left ventilator of the heart. This gave me inflammation of the left borax, and now I am sick with the chloroform morbus. There is no blessin' like that of health, particularly when you're ill."

MALIGNANT PUSTULE AND IODOFORM.—Dr. E. Rinonapoli, *Bolletino della R. Accad. Med.-Ch. di. Napoli, Lancet*, September 21, the method employed is that of several injections into and around the seat of the pustule of a ten per cent. solution of iodoform in ether. The pain attending the injections is of a severe burning character, but soon passes off. The beneficial effects are rapid in their appearance. In three or four hours after the injections, even in advanced cases, the fever lessens, the swelling around the pustule disappears, the tongue becomes clean, and the patient is able to sleep and to take food. The treatment appears to be of distinctly specific character, and to arrest at once the growth and multiplication of the charbon bacillus. If applied at the outset of the attack, the effect is said to be almost magical.

PHTHISIS AND CARBONIC ACID.—Dr. Hugo Weber, *Berlin klin. Woch.*, *Med. Rec.*, September 21. The method consists in administering to the patient a teaspoonful of bicarbonate of soda before meals and following it with a glass of water containing twelve drops of muriatic acid. There is generated about half a pint (270 cc.) of carbonic acid gas, which is gradually absorbed and inhaled by the lungs. Weber reports nine cases favorably affected by this treatment.

PHTHISIS AND WOOLEN CLOTHING.—Dr. Grechko has examined the effects of supplying phthisical patients with woolen clothing. He finds (St. Petersburg Dissertations, *Lancet*, August 24) that the loss by the lungs and skin is greatly increased during the first twenty-four hours; the temperature of the skin distinctly increased during the first day, but after that it begins to fall slowly, so that by the end of the week it has become normal.

"Uncle Pomp," said Colonel M. to a former slave, "I hear that some of your darkies down on the lower place are afflicted with the itch."

"Bein' as it's you, boss," replied old Pompey, hesitatingly, "I mus' confess dat de Lawd has seen fit to afflick us dat way, for a fac."

"Oh, doing anything for it?"

"Yes, sah; oh, yes, sah."

"What?"

"Why, we—er—am scratching for it."—*Chicago Druggist.*

BALSAM OF PERU IN THE TREATMENT OF OZÆNA.—Practitioners who see much of ozæna know well that it is one of the most intractable diseases. Even with the frequent washing out of the nasal passages with antiseptic lotions and sprays, with medicated bougies, and with cotton-wool plugs applied in the manner recommended by Gottstein, only the most transitory deodorization of the breath from the nostrils can be effected, and patients and their friends are driven almost to despair. Any new suggestion for the relief of this disgusting complaint will therefore be welcomed. Dr. W. Ebstein has lately reported very satisfactory results obtained by Dr. Rosenbach with balsam of Peru. The mucous lining of the nasal fossæ is painted every day with the medicament, and a plug of cotton wool soaked in it is left in the deep parts of the nose. By this means Dr. Rosenbach has succeeded in cases in which every other antiseptic and deodorizer had been tried in vain. It is not probable, however, that experienced practitioners, who have often been disappointed with the effect of the most promising suggestions for the cure or mitigation of ozæna, will be disposed to pin their faith too tightly on any new remedy, more especially, perhaps, in the case of Peruvian balsam, which seems just at present in some danger of becoming a panacea in the hands of some of our German brethren.—*London Med. Recorder.*

FORMULÆ FOR CORNUTIN.—Cornutin, the new uterine hæmostatic, may be given either by the mouth or hypodermically. The following formulæ are recommended by the *Journal de Médecine de Paris*, June 16:

I. For hypodermic injection.

℞.—Cornutin	gr. ¼
Distilled water	fʒijss.
Hydrochloric aid	gtts. jv.—M.

Sig. One syringeful for an injection.

II. In pill form.

℞.—Cornutin	grs. 1¼.
Gum arabic paste . . .	ʒj.—M.

Make into twenty pills. Sig. Two or three at a dose.

THE CONSTRUCTION OF A NEW BLADDER AFTER EXCISION.—At the Surgical Congress recently held at Bologna, Professor G. Tizzoni, of the University of that city, and A. Poggi gave an account of some experiments they had made on dogs, with the view of ascertaining whether the bladder could be removed and an efficient substitute constructed by operation. First of all laparotomy was performed, and a loop of small intestine about seven centimetres in length, with its mesentery attached, was isolated by two transverse cuts, washed out with a carbolized solution, and tied at both ends, one extremity being fixed in front of the neck of the bladder. The two ends of the divided gut were then stitched accurately together by circular suture. The dog soon recovered from the operation, and a month later the second stage of the experiment was performed. The ureters were separated from the bladder, and the latter was completely removed. The loop of intestine destined to be the new bladder was then cut across at the lower end and stitched to the neck of the bladder. The ureters were then turned into the artificial bladder. A slender elastic drainage-tube was placed in the urethra to carry off the urine during the first few days. The animal recovered perfectly, and gradually acquired control over its new bladder, and when shown to the Congress, two months later, showed no sign of incontinence. The operation has been repeated with success on several other animals, and Drs. Tizzoni and Poggi are hopeful that it may be applicable to the human subject.—*Medical Recorder.*

TREATMENT OF HICCOUGH.—Dr. John I. Brinkerhoff, of Auburn, N. Y., writes to the *New York Medical Journal* of July 6th, that he has found calamus a remedy for hiccough in every case in which he has used it, including some cases of an aggravated character. A very small quantity suffices, only enough to reach the throat when dissolved by the saliva.

NEW SKIN REMEDIES.—Schwimmer has lately, in the *Wiener Medizinische Wochenschrift*, published the results he has obtained in certain skin diseases by the use of salol, oxynaphthoic acid, salicylate of mercury, and anthrarobin. Salol mixed with starch in the proportion of two to one he finds a very effective remedy in all forms of venereal sores and in the buboes resulting from them. Iodoform seems to have a more rapid action, but salol has the superiority of possessing no smell. The drug also appears useful in conditions of the mucous membrane of the bladder, when given internally in doses of forty-five to ninety grains distributed through the day. Oxynaphthoic acid did not give good results in venereal cases, acting as an irritant. In scabies, however, it did not irritate, and was an effective remedy. It may be mixed with chalk and soft soap, each ten per cent., with lard. It acted well also in the secondary eczema of scabies, and allayed itching in prurigo. Salicylate of mercury possesses no superiority over the ordinary remedies used in gonorrhœa and venereal sores. Given internally in doses of one and a half to two grains, it was an effective anti-syphilitic drug, although apt to cause irritation of the intestine and stomatitis. Anthrarobin was found to have no beneficial effect in psoriasis, but in herpes tonsurans, eczema marginatum, and pityriasis versicolor it acted well, being mixed with collodion in the strength of one to ten.—*British Medical Journal*, June 29, 1889.

Bilious Attacks.—The bilious attacks occurring in neurotic individuals are very different paroxysms from those seen in habitual or occasional overfeeders. A clean tongue—often "geographical" or desquamating too freely in patches—a scanty, high colored lithatic urine, a sallow face, white motions, dilated pupils, low spirits, and absence of energy, constitute the clinical entity in many cases of bilious attacks. These are very common in neurotic children with dainty appetites, in whom to suppose that irritation and vascular engorgement of the viscera, from overfeeding, exist, would be ridiculous. A sharp purge to these patients may do more harm than good, though it is possible to set the viscera working again by such sudden means. An inadequate liver may be the cause of a toxemia, and the poison in the blood may have a selective action on the mental centers, originating lowness of spirits, melancholia; this is the view most favored by the laity, but it is often incorrect In truth, a mutual tension between the viscera and the brain exists—reciprocity rules the realms of the human body as it does the social organism. The truth appears to be that the viscera may go wrong as the result of being undercharged with nervous energy, and they simply cease to work effectively because of defective nervous energization. The correct treatment is not a dose of castor oil, but a tablespoonful of wine at once, and a tablespoonful of syrup of the hypophosphites three times every day for one week. -Angel Money, in *Lancet.*

Quinine in Cholera.—Dr. Lawrie, the Residency surgeon in Deccan, asserts that quinine in three to five grain doses three times a day is an efficient preventive of cholera.

Massage of Abdomen and Lumbar Region as a Diuretic.—Dr. Polubinski reports his observations of massage on the abdomen and lumbar region made with a view of ascertaining its physiological action on the kidneys. The subjects upon whom he experimented were healthy persons, and they received the same quantity of food. The experiment commenced at 12 (*noon*), when the subjects (ten in number) urinated, and the urine thrown away. The urine of twenty four hours was collected in different vessels as follows: First portion from 12 to 2 P. M. (in massage days: dinner, half hour; massage, half hour and one hour rest); second portion, from 2 to 4 P. M. (massage, half hour, one and a half hour rest),

and from 4 to 12 of the following day. When the abdom
was massaged, the quantity of urine during the first tw
hours was considerably increased, so much so that the who
quantity of the twenty-four hours, as compared with that
non-massage days, was notably increased. The amount
urine between 12 and 4 P. M. was three times that on no
massage days for the same period. Even the third porti
of the urine (from 4 P. M. till noon) was on the increase, i
significantly though. Along with the increase in quantit
the solids, urea and urates were increased. When massa
of lumbar region was made, the quantity remained the sa
on non-massage days, but the solids, urea and urates consi
erably increased during the whole twenty-four hours.-
Vratsch.

Therapeutic Actions of Hydrastis Canadensis.—T
latest investigations concerning the therapeutic actions
hydrastis Canadensis are probably those of Dr. M. Hein
cus, of Sweden, the results of whose experiments are quote
in the *Fortschritte der Medicin* of June 15th.

The author endeavored to determine accurately, by e
periments on animals, the action of the drug upon the hea
and respiration, and its contractive powers upon the uter
and vagina. In his experiments he either used injections
the pure drug or else diluted it with equal parts of a wea
salt and water solution. The injections were made into th
jugular vein, and rabbits the animals used. It became a
parent that every injection caused a marked decrease in th
pressure of blood, but the pressure is gradually regaine
although not reaching the previous pressure. If large dos
are given, the pressure sinks rapidly and soon becomes a
normally low, and the animal dies. The pulse will remai
frequent for some time, and it is not until the blood pressu
becomes abnormally low that it begins to get uneven an
slow. Cutting of both vagus nerves does not lessen the ca
diac action of the drug. Heinricus concludes that hydrast
Canadensis is an active heart poison. It exerts a paralyzin
influence not only upon the nervous centers of the vascul
walls, but also directly upon the heart. After large inje
tions the respirations cease entirely for about ten second
then begin again, at first being very shallow, but graduall
increasing in depth. Small doses strengthen the respiration
The author failed to observe any contraction of either th
uterus or vagina to follow the use of the drug.

GANGRENE OF THE COLON: SUCCESSFUL RESECTION. In the report of the meeting of the Edinburgh Medico-Chirurgical Society, held on December 5th, reference was made to a case of cure, by resection of the intestine, of a fæcal fistula which was the result of extensive gangrene of the transverse colon. The case, which was under the care of Mr. Cotterill, Assistant Surgeon to the Edinburgh Royal Infirmary, has since been published. The patient was a very stout woman, eighteen stone in weight, and thirty-eight years of age. She had been subject to umbilical hernia for seven years. When seen by Mr. Cotterill she was seven months pregnant. The rupture was a bright red and angry looking prominence about fourteen inches in diameter. The patient vomited coffee-colored fluid mixed with blood. The sac was opened, and was found to contain a large coil of gangrenous transverse colon, much sloughy omentum, and free from fæculent matter. The gangrene appeared to be due, not to strangulation, but to pressure of the structures in the sac, between the pregnant uterus below and a firm binder which had been worn above. Fifteen inches of colon were cut away, and the ends of the gut were stitched to the edges of the wound. The patient gave birth to a child three days after the operation. For three months after [illegible] the patient was troubled [illegible] the discharge of [illegible] again put herself [illegible] Mr. Cotterill's care. He succeeded in keeping [illegible] and then performed resection [illegible] freed from adhesions [illegible] the escape [illegible] ends [illegible] sufficiently [illegible] operator [illegible] a small [illegible] there [illegible] segment [illegible] away [illegible] had been [illegible] hard [illegible] of [illegible] tory [illegible] tent, [illegible] the Czar [illegible]

of the mesentery were sutured together, and the gut
returned into the abdomen. The large umbilical open
was brought together by deep silk stitches, and a pad
binder were applied. The operation took three hours.
the third day feces passed. The patient made a good rec
ery. No less than twenty-two inches of large intestine w
removed in the course of the two operations.

Microscopy.

The San Francisco Microscopical Society.

Reported for the MEDICAL NEWS by C. P. Bates, Recording Secretar

Two samples of diatomaceous earth from the Eighth Str
Tunnel deposit of Richmond, Va., were received from
Richmond Microscopical Society. An unusually interesti
budget of microscopic miscellany was added to the Societ
files. Dr. Ferrer was present for the first time since
return from Europe, and exhibited a number of new acc
sories for the microscope, notably the following:

A new sliding nose-piece with centering attachment
use with high-power objectives. It consists of a body pie
which screws to the nose of the microscope and remains
place, and the objective part, which screws to the object
and is fitted to the body by a sliding system. When
place, the objective is correctly centered by means of t
keyed screws for forward and lateral motion, and once pr
erly centered the objective remains in and is removed w
the sliding piece, the body remaining on the microsco
Each objective is furnished with a sliding piece to fit the c
body, thus doing away with the double and triple no
pieces, which soon become unsatisfactory from their tender
to wear and become loose at the collar joints.

Another very unique device was an iris diaphragm, to
used in connection with the Abbe condenser, and wh
commends itself for the simplicity of its manipulation.

Two aplanatic lenses, one for use in the dissecting mic
scope, the other for low-power hand purposes, made by
well-known Steinheil, were also shown. Probably the m
interesting of the Doctor's exhibit was the new illuminat
apparatus called the Koch or Wolz lamp. It consists o

plain, round burner, kerosene lamp, mounted on a stand that can be raised and lowered. It is covered by a chimney of japanned sheet iron with two tubulations on a level with the most luminous part of the flame, each tubulation holding a solid glass rod, one straight for the top light and the other curved for illuminating beneath the stage of the microscope. The rods are made of the new apochromatic glass, which has the peculiarity of transmitting a soft yet intense white light, without apparently giving off any lateral rays, thus enabling the observer to work in a dark room and dispense with the aid of mirror or condenser.

A very fine series of photo-micrographs was added to the Society's collection, one of the number, a photograph of Pleurosigma angulatum, being taken at an amplification of 4,000 diameters with perfect definition.

THE SHAPE OF HUMAN SPERMATAZOA.—Dr. F. L. James, of St. Louis, as we believe we have mentioned before, besides being one of the editors of the *St. Louis Medical and Surgical Journal*, has charge of the *Microscopical Department* of that journal. He is an industrious worker at the tube, and has contributed to microscopical literature very considerable valuable material. In a recent issue of the *Journal* he has an article on "The Shape of Human Spermatozoa," which we take the liberty to copy:

"In preparing some illustrations, not long since, for a little text book on skin diseases by my confrere, Dr. Ohmann Dumesnil, I was struck with the incorrectness of most of the engravings of many microscopical objects which were found in even the latest of text-books. On comparing a number of these with other and older works, I found that the latest were frequently but copies of the more ancient ones, and that authors and publishers had thus gone on reproducing, from time to time, the errors of their predecessors. Considering the advances made in micrography, in photo-micrography, and photo-engraving, the illustrations, or 'cuts' would probably be the better word, are inexcusable anachronisms, and it is to be hoped that in future works on subjects requiring illustration, use will be made of the more modern methods. Mr. E. M. Nelson, in the *Journal of the Queckett Club*, has called attention to the continued pictorial misrepresentation of the shape of the human spermatic cells or 'spermatozoa,' the head of which has hitherto been most persistently incorrectly

delineated. Mr. Nelson accompanies his article with a pl
giving what all who have carefully studied the cell m
pronounce a very nearly correct representation of it.
he states, in nearly all drawings hitherto published, the lar
end of the ovoid has been turned toward the 'tail,' wher
the smaller should occupy this position. In Mr. Nelso
drawings, the head fits into a cup-like cavity not hithe
observed or, at least, delineated. He also shows a fl
gellum, or *filament*, as he calls it, on the head, the functi
of which is stated to be the guidance of the spermatozo
into the micropyle of the ovum."

We regret that Dr. James does not accompany his arti
with a "cut" illustrating the plate of Mr. Nelson, whi
we have not been so fortunate as yet to see. We are s
it would have been interesting to his readers.

FLAGELLATE BACTERIA.—We copy the following also fr
the *St. Louis Medieal and Surgical Journal:*

"Lœffler has just published, in the *Centralblatt fuer B*
teriologie, a paper illustrated with a number of photo-mic
graphs of flaggellate microbes, comprising one micrococ
and several bacilli, the flagellæ of which he has demonstra
by the application of an entirely new method of staining,
follows:

"*Stain:* Into an Erlenmeyer flask containing from four
five grains of any one of the anilin colors commonly u
for microbic staining (fuchsin, methyl blue or methyl v
let), pour one hundred cubic centimeters of anilin water m
in the usual manner (by saturation of water with anilin
by agitation and filtering) and to which has been added
cubic centimeter of a one per cent. solution of sodium hydra
close with a rubber stopper and agitate until solution ta
place. This is the stock fluid from which a few drops m
be filtered into a watch-glass as required.

"*Mordaunt.* Add to ten cubic centimeters of a twe
per cent. aqueous solution of tannic acid, drop by drop,
aqueous solution of ferrous sulphate, until a black violet co
is obtained. In another vessel rub up one part of extract
logwood with eight parts of distilled water, and add, c
tiously, sufficient of this liquid to the first solution until
color of the latter is changed from a blue-black to a mud
dark violet, ceasing the addition before a precipitate is thro
down. As a preservative, add four to five cubic centimet
of a five per cent. aqueous solution of carbolic acid.

"*To use:* Prepare the cover glasses in the usual way, by spreading the material, passing through flame, etc., and flood them with the mordaunt, carefully steaming them over the flame for a few seconds. Rinse with plenty of water and thoroughly remove all excess of mordaunt. Float the stain on the preparation and steam gently over the flame for a few minutes, being careful not to scorch. When fuchsin is used, the process is complete when the coverglass assumes a blackish red color. Thorough rinsing under the tap finishes the operation, and the preparation may be examined at once, or mounted in the usual way."

Micro-Organisms of Dental Caries.

Biological Association of Paris, Meeting of March 16, 1889.

Messrs. Galippe and Vignal have studied the microbes which penetrate into the little dentine canals, and which alone play an effective part in the destruction of teeth. They cleansed the dental cavity, crushed the tooth, enveloped in sterilized paper, in a vice, and sowed the several particles in different media. In this way they obtained six varieties of micro-organisms.

1. Small, short and thick bacillus is found constantly, coagulates milk with formation of lactic acid.
2. Bacillus twice as long as broad, slightly narrowed in the middle, also forms lactic acid in milk.
3. Bacillus, similar to the preceding one, without narrowing, forms long chains, does not coagulate milk, prevents caseine from coagulating with acids, and transforms milk into a yellowish brown fluid.
4. Very short and tender bacillus, about as long as broad, resembling a coccus. Transforms caseine, which soon exhales an unpleasant odor and takes a brown coloration, such as the media of culture. It dissolves fibrine.
5. Roundish bacillus 4–5 fl. long, found eight times only. It transforms milk without coagulating it into a brown fluid, which after some time becomes black and exhales a bad odor.
6. Coccus, comparatively voluminous, 6 fl in diameter, found five times only in teeth of advanced cariousness with wide canaliculi. It coagulates milk and forms lactic acid.

In addition, the pulp furnished the following three varieties:

1. Bacterium termo, which is met with in all albuminou substances in a state of decomposition.
2. Acts in the same way on albuminous bodies, interverts sugar and forms lactic acid.
3. Staphylococcus pyogenes aureus in a pulp intensivel infected.

The biological properties of the microbes enumerate explain the process of caries. The microbes form lactic acid and dissolve the mineral substances of the teeth. The microbes disappear in the organic substance and destroy albuminous bodies. The work of destruction is promoted b the saprogenic microbes present in the mouth.—*Deutsch Medizinal-Zeitung*.

Book Notices

A TEXT-BOOK OF ANIMAL PHYSIOLOGY. With Introductor Chapters on General Biology and a Full Treatment o Reproduction. For Students of Human and Comparative (Veterinary) Medicine, and of General Biology By Wesley Mills, M.A., M.D., L.R.C.P., (Eng. Professor of Physiology in McGill University, and th Veterinary College, Montreal. With over Five Hundred Illustrations. 8vo. Pp. 700. Cloth. New York D. Appleton & Co. Cincinnati: R. Clarke & Co Price, $5.00.

"It is no longer the custom with zoologists," says th author of the work on our table, "to place man in an entirely separate group by himself; but he is classed with th primates, among which are also grouped the anthropoid apes gorilla, chimpanzee, orang, and the gibbon, the monkeys o the Old and of the New World, and the lemurs. So grea is the structural resemblance of man and the other primates that competent authorities declare that there is more difference between the structure of the most widely separate members of the group than between certain of the anthropoid apes and man.

The points of greatest resemblance between man and th anthropoid apes are the following: "The same number o vertebræ; the same general shape of the pelvis; a brain distinguishing them from other mammals; and posture, bein bipeds.

"The distinctive characters are size rather than form o the brain, that of man being more than twice as large; a relatively larger cranial base, by which, together with the greater size of the jaws, the face becomes prominent; the earlier closure of the sutures of the cranium, arresting the growth of the brain; more developed canine teeth and difference in the order of eruption of the permanent teeth; the more posterior position of the foramen magnum; the relative length of the limbs to each other and the rest of the body; minor differences in the hands and feet, especially the greater freedom and power of apposition of the great toe.

"But the greatest distinction between man and even his closest allies among the apes is to be found in the development, to an incomparably higher degree of his intellectual and moral nature, corresponding to the differences in weight and structure of the human brain, and associated with the use of spoken and written language; so that the experience of previous generations is not only registered in the organism (heredity), but in a form more quickly available (books, etc.).

"The greatest structural differences between the races of men are referable to the cranium; but since they all interbreed freely, they are to be considered varieties of one species."

"Protoplasm, in whatever form, after passing through certain stages in development, undergoes a decline, and finally dies and joins the world of unorganized matter."

We have quoted as above from two different portions of Prof. Mills' Animal Physiology. From these extracts, it will be perceived that there is not so great difference between man and the lower animals as many unthinking persons are disposed to think there is. In the following respects they are certainly alike: Both are made of *protoplasm*. Both, if they are not cut off prematurely, "undergo decline, and finally die and join the world of unorganized matter." Surely, one has not much reason to boast over the other—not, certainly, as regards its ending, for the termination of both is the same—decay and death. Neither has one much to boast over the other during life, for the lives of both are largely spent in struggles for existence.

But we are digressing. Our purpose in bringing the work of Prof. Mills to the attention of our readers is to give them some information in regard to it.

We do not believe that we will too greatly magnify the merits of the work by saying that we are of the opinion that it ought to be in the library of every intelligent physician It contains a large amount of information upon comparativ anatomy and physiology with which a medical man shoul be acquainted—information of a kind that will tend to ex pand his mind and give him a better appreciation—a bette understanding—of human anatomy and physiology. Th author is an original investigator; and while he presents t his readers the results of the latest investigations by a workers in the same field, he also details what he has elabo rated by his study, thus furnishing many facts which hav not yet been recorded in other works.

The author, in an introductory, considers General Biology and then passes on to the treatment of Cells—animal an vegetable. All kinds of cells are described and illustrate by appropriate cuts. Bacteria and animalculi of ever variety are given attention.

As we proceed with the work, we come to the Classific tion of the Animal Kingdom. After this there is taken u and explained at length Reproduction—the ovum, the mal cell, origin of spermatozoa, segmentation, etc.

But we have not the space or time to enter upon anythin like a description of the work, and the subjects treated. W recommend our readers to procure it and study it for then selves. The author states that it has been his aim, fror first to last, to make the book educative; and, retaining vivid recollection of the severe strain put upon the memory the medical student by our present method of crowding much into, at most, four years' study, he has attempted t avoid overloading the work with mere facts or technical d tails, as well as to present the whole subject in as succinct form as is compatible with clearness. Recognizing, too, th very shifting character of physiological theories, the latte have generally been pretty well kept apart from the actu facts.

The Messrs. Appleton & Co., of New York, have prepare the work in a very creditable form. It is printed on goo paper in excellent type. The wood engravings are superi of the kind.

A Reference Handbook of the Medical Sciences. E bracing the Entire Range of Scientific and Practic Medicine and Allied Science. By Various Writer Illustrated by chromo-lithographs and fine wood engr vings. Edited by Alfred H. Buck, M.D. Volun

VIII. Containing an appendix (523 pp.) and a general index (197 3-column pp.). William Wood & Co., New York.

The present volume, Volume VIII., brings this work to a termination. The person who possesses the eight volumes constituting the *Reference Handbook of the Medical Sciences*, has almost a complete library upon all the subjects pertaining to medicine, surgery, obstetrics, gynecology, materia medica, therapeutics, anatomy, physiology, hygiene, etc. But we have explained the scope of the work in notices of previous volumes, and it is not necessary, therefore, that we should repeat it.

More than three hundred men and women, experts in some particular department of medical knowledge, or in one of the kindred sciences, have contributed the actual text of these eight volumes. The work, consequently, is not a mere compilation or digest of existing treatises, for each article represents the researches and best thoughts of the writer upon the subject of which it treats, for it belongs to the department in medicine of which, it is understood, he has made a special study.

A few of the contributors of the volume before us are Drs. James B. Baird, Atlanta; Samuel C. Busey, Washington; J. Solis Cohen, Philadelphia; A. T. Cabot, Boston; C. S. Minot, Boston; E. C. Spitzka, New York; Thos. L. Stedman, New York; Geo. M. Sternberg, U. S. A., Washington; Arthur Van Harlingen, Philadelphia.

SAUNDERS' QUESTION COMPENDS No. 6. Essentials of Pathology and Morbid Anatomy. By C. E. Armand Semple, B.A., M. B., Cantab; L.S.A., M.R.C.P., Lond.; Physician to the Bloomsburg Dispensary; Physician to the North-Eastern Hospital for Children, etc. Author of a "Manual of Diseases of Children," "The Voice, Musically and Medically Considered," etc. With Forty-six Illustrations. 12mo. Pp. 160. Cloth. Philadelphia: W. B. Saunders, 913 Walnut Street. Price, $1.00.

Manuals like this are in no way intended to supplant any of the text-books, but to contain, as titles declare, the essence of those facts with which the average student must be familiar.

This little work, although belonging to the series of "Saunders' Question-Compends," has not been prepared in the form of questions and answers, like others of the series. It is presumable that the subjects belonging to the department of medicine to which it is devoted, could not be conveniently taught in that manner.

Students of medicine, especially those in attendance upon medical lectures, will find this a very valuable little volume. The author has only endeavored to present an outline of pathology and morbid anatomy, and certainly he has succeeded admirably. The work may be regarded as *multum in parvo*. A very good idea of pathological anatomy may be had from it.

Among the subjects treated are inflammation, tuberculosis, degenerations, fatty, calcareous, pigmentary, colloid, etc., tumors, sarcoma, neuromata, carcinomata, epithelial cancer, septicemia, pyemia, atrophy, pathology of the urine; parasites, animal and vegetable; bacteria; bacilli, etc.

THE MEDICAL NEWS VISITING-LIST, 1890. Thirty Patients per Week. Philadelphia: Lea Brothers & Co.

This Visiting-List has become very popular with physicians. It certainly presents the handsomest appearance of any that are issued, and, on that account, would be the one to select for the purpose of presenting to a physician as a holiday gift. It is bound in red flexible morocco, and its edges are gilt.

It has the usual rulings for keeping memoranda of visits. Also pages for general memoranda, obstetric engagements, memoranda of deaths and causes of deaths, cash accounts, etc. There will be found tables of doses of medicines, poisons and antidotes, therapeutic tables. The List for 1890 will be found much improved. From the text have been dropped remedies that have not justified the estimation in which they were held, and others have been put in their place. The work has been brought as near to perfection as seems to us possible.

PHYSICIANS' POCKET REFERENCE BOOK AND VISITING LIST. For 1890. St. Louis: J. H. Chambers & Co. Price, 75 cts.

This Visiting List is almost identical in its construction with that of Lindsay and Blakiston. It has among its features thinness and lightness, which many physicians admire very much in a visiting list designed to be carried in the pocket.

It is ruled for twenty-five patients a week. It has pages set apart for general memoranda, obstetric engagements, death records, etc. It contains a few pages of printed matter, but probably less than that of any other List, though it may be more than many physicians would wish. It is certainly very cheap.

Editorial.

CHRONIC NASAL CATARRH.—In the last volume (Volume VIII.), just issued, of "The Reference Handbook of the Medical Sciences," is a lengthy article by Dr. John Nolan MacKenzie, Professor of Diseases of the Throat and Nose in the University of Maryland, Baltimore, on *Chronic Catarrhal Inflammation*, in which he alludes to some of the sequelae of that affection, among which, he considers, are diseases of the lungs.

As one of the paragraphs of the article contains some observations of considerable interest to physicians generally in regard to the danger of pulmonary complications supervening in cases of nasal catarrh, and of interest especially to medical examiners of life insurance companies, we copy it in full. Very many members of the medical profession are not disposed to regard chronic nasal catarrh as an affection which is likely, directly or indirectly, to shorten the term of life, and, therefore, if an applicant for a life insurance policy should present himself before one of them for examination as regards his prospects of longevity, and he should confess that he had been suffering for a number of years with a nasal catarrh, but, nevertheless, had enjoyed good health, we think it probable that the said examiner, in consquence of the views which he holds, would report that he found in him no cause that would endanger his attaining to the average length of life—providing that no other morbid condition was discovered to exist. But Dr. MacKenzie is of the opinion that chronic nasal disorders frequently lead to pulmonary diseases, as our readers will perceive from the quotation we make from his article:

"In nasal obstruction of long standing, chronic inflammatory changes are sometimes induced in the bronchial and pulmonary mucous membrane, which are exceedingly difficult to deal with, even after the original cause is removed, and this has doubtless given rise to the popular idea that 'catarrh' is the forerunner of consumption. Certain it is that nasal obstruction predisposes, other things being equal, to inflammatory conditions of the respiratory tract, and that the practical physician can not afford to overlook the influence which it exerts in their production. In this country the vast majority of the cases of chronic laryngitis originate primarily in disease of the nose, and many a winter cough is allowed to go on from bad to worse because of failure to recognize this relationship. I am furthermore convinced that nasal obstruction may, and does, awaken diseased states of the lungs, and *in an individual so predisposed, may favor* the development of pulmonary consumption. Frankel states that emphysema frequently coexists with nasal stenosis, and Kursmane believes that acute hyperemia of the lung may be produced by the forced inspiration of the air. The vesicular murmur is weakened, feeble and shortened in inspiration, and only approaches the normal when deep inspiratory efforts are made. Frequently mucous and subcrepitant rales can be heard in different portions of the chest. Attention has been called to certain deformities of the chest-walls, consisting chiefly in malposition of the bones and loss of power in the muscular covering. I believe these deformities to be rare, except in very young children."

We met, recently, with a case of considerable deformity of the chest-walls in an adult. It was congenital, and we were told that it had been hereditary—the mother of the person having had the same deformity, and also several brothers and sisters. The party was a gentleman from twenty five to thirty-five years of age. The deformity consisted in an abrupt diminution in the circumference of the chest immediately below the nipples. The ribs below the seventh rib (if our memory serves us rightly), on each side, seemed to be collapsed, as if they had yielded to a great pressure—their curves having been greatly lessened. This gentleman had been refused a policy of life insurance in the New York Mutual, on account of the deformity—he having volunteered the information of its existence to the examiner of that company; but he came very nearly obtaining a policy from the Etna by using every effort to conceal the deformity when examined for insurance. Though now apparently in good health, he will, no doubt, contract phthisis pulmonalis before he will become fifty years of age, unless he should die before on account of contracting some acute disease.

OFFICERS OF THE AMERICAN MEDICAL ASSOCIATION.—At the late meeting of the American Medical Association the following officers were elected, and appointments made:

President, E. M. Moore, of Rochester, N. Y.

Vice-Presidents: J. W. Jackson, of Missouri; W. W. Kimble, of Minnesota; J. H. Warren, of Massachusetts; T. B. Evans, of Maryland.

Permanent Secretary, Wm. B. Atkinson, of Philadelphia.

Treasurer, R. J. Dunglison, of Philadelphia.

Librarian, C. H Kleinschmidt, of Washington, D. C.

Judicial Council: N. S. Davis, of Chicago; J. H. Brown, of Kentucky; Wm. Brodie, of Michigan; R. C. Moore, of Nebraska; —— Gillespie, of Tennessee; T. A. Forster, of Maine; J. B. S. Jones, of Georgia.

Trustees of the Journal: T. O. Hooper, of Arkansas; Alonzo Garcelon, of Maine; I. N. Love, of St. Louis; W. W. Dawson, of Cincinnati.

Address on State Medicine, A. L. Carroll, of New York.

Committee to fill vacancies in the appointments to deliver general addresses: Drs. Wm. Brodie, J. H. Murphy, and I. G. Morris.

Place of next meeting, Nashville; time, the third Tuesday in May.

Chairman of the Committee of Arrangements, W. T. Briggs, of Nashville.

Assistant Secretary, G. C. Savage, of Nashville.

LONGVIEW LUNATIC ASYLUM.—We recently had the pleasure of visiting this institution, which has been under the management of our friend, Dr. Charles A. Miller, since April, 1878—over eleven years.

We make the following quotation from the report of the Board of Trustees to the then Governor of Ohio, after Dr. Miller had served his first year as Superintendent: "We are happy to state that the officers, attendants and employes are generally faithful and efficient. The wards are kept scrupulously clean, every attention and kindness are shown to the patients, as little coercion as is consistent with their safety and health is used, as large an amount of outdoor exercise as possible is afforded, and manual labor, as far as practicable, is uniformly required. Amusements and music are judiciously employed, with very satisfactory results. So quiet is everything about the buildings, both by day and night, that a stranger could hardly persuade himself he was under the same roof and in the midst of more than five hundre fellow-beings afflicted with various forms of mental disease.'

When Dr. Miller took charge of the institution, in 1878 the patients were distributed throughout the building withou much further classification than a division into male and femal departments, in consequence of the excessive overcrowdin of all available space by inmates. The Superintendent immediately preceding Dr. M., said in his report for the yea 1877, that the "Asylum, originally intended to accommodat a maximum of four hundred, and to which no additions hav since been made, has now a population of nearly six hundred, with no immediate prospect of relief. In the presen condition, it is found impossible to properly classify, o strictly speaking, to classify at all."

The first labor, therefore, of Dr. Miller, when he too charge of Longview, was to bring about some order—som arrangement—by which the state of disorder then existin might be remedied. Though exceedingly difficult, under th circumstances, to make a classification, to distribute the inmates into groups or classes according to some commo relations or affinities, he finally, after days and weeks of careful study of the history, diagnosis and peculiarities of eac patient, adopted the following arrangement:

First ward, convalescents; second ward, epileptics an dangerous patients; fourth ward, cases under special treatment; fifth ward, general paralytics and filthy cases; sevent ward, working patients; eighth ward, receiving ward; tent ward, harmless, chronic cases.

It should be mentioned, probably, that Hamilton County including the city of Cincinnati, forms a lunatic district b itself, and, by law, all lunatics and idiots of the district fin an asylum in Longview. To each of the other four or fiv asylums in the State several counties send their deranged but are compelled to provide for their pauper idiots and incurably insane in their poorhouses.

Dr. Miller, in the *Twenty-Ninth Annual Report* of Longview to the Board of Trustees—the report for the year 188 —states that there were admitted 190 patients; discharged 171; daily average, 779; died, 57. There were remaining consequently, at the end of the year, 782. Of these, 35 were males, and 423 were females.

The recoveries of the admissions were twenty-four an one-fifth per cent. The deaths were six per cent. of the tota number under treatment. The increase of the whole num ber of inmates during the year was nineteen. The total expenses of the year were $135,152.11, or $3.25 each patient per week. The United States Government used to pay to the Good Samaritan Hospital of Cincinnati $5.00 per week for each marine or boatman.

It is generally admitted that no institution of its kind in the United States is better managed than Longview Lunatic Asylum under the superintendency of Dr. C. A. Miller. We found perfect order prevailing throughout its wards. Every hall, dining-room and dormitory exhibited tidiness and the utmost cleanliness. All the beds had comfortable mattresses, snowy sheets and excellent comforts. The most fastidious person could have found nothing to object to. We visited the bakery, laundry, shops, gas-making department for illumination—in fact, we looked into every department of the immense building (since Dr. Miller has been in charge great additions have been made), and were filled with admiration of everything that we saw. Those who can make it convenient, should visit the institution. They will find in it object-lessons of order, system and intelligent management that will furnish them subjects for study for a very long time.

NEW HOSPITALS.—A surprising number of hospitals have recently been organized in Cincinnati, and we hear almost daily of the contemplation of organizing still others. The Episcopalians have started a hospital, so have the Methodists and Presbyterians. Besides these there is a Gynecological or Female Hospital that is about ready to be opened on Walnut Hills, and several Children's Hospitals in different parts of the city.

Is there a need for all of these hospitals? We do not believe there is. It seems to us that some other motive is sought to be subserved in the recent movements for the organization of so many new hospitals than to relieve the sick poor. The hospitals that have existed in Cincinnati for a long time, and are thoroughly equipped and established, are sufficient for present purposes. There is the Cincinnati Hospital, which occupies a whole square, and is capable of accommodating from six to eight hundred sick; the Good Samaritan Hospital, also a large institution, to which is being erected an addition for sick children; the Betts Street Hospital, which has two or three hundred beds; the Jewish Hospital, ample in size for the accommodation of all having qualifications for admission; the Homeopathic Hospital;

Dr. Reamy's Female Hospital, that has finely furnis
rooms for fifty or sixty ladies; the Children's Home,
which sick children are admitted as well as well or
Besides these, are other institutions, in which the indig
sick as well as those patients who are able to pay
find a retreat and medical treatment. A short time ago,
know, Mrs. Storer, the philanthropist, kept up, at her c
expense, a small hospital in which children were nursed
received medical aid; and, if we are not mistaken,
institution is still in operation.

People of wealth, and those who are not wealthy, are c
stantly importuned to contribute to charitable purposes
to objects of a more or less charitable character. Th
who belong to churches must give to support their minist
keep up their churches, Sabbath-schools, foreign and dom
tic missionary societies, the poor of their churches. I
every one, whether religious or not, is solicited to subscr
to public charities—schools and colleges, libraries, ne
boys' homes, humane organizations, etc. Really, the pul
are becoming restive of the very many and urgent imp
tunities brought to bear upon them for money for the c
stantly increased objects of a more or less charita
character. Is it policy, therefore, to continue to multi
organizations that will have to be supported by the con
butions of the generous?

It has been intimated to us by persons who seem to be
a position to know what they assert is true, that the pres
movements that are being made for the organization of n
hospitals have been started by physicians who wish po
tions in order that they may make themselves promin
before the public. Such motives are not of a worthy ch
acter, and if they are entertained by any one they will
of success. The charitable and humane have already th
generosity, as we have intimated, taxed to the utmost, a
for whatever new objects they may contribute by impor
nities, they will be under the necessity of making their c
tributions to former ones that much less. How ma
worthy objects are languishing for want of funds? Wh
then, place still others in the same condition in order
establish hospitals that are not needed.

The statute books of Ohio have laws for punishing crue
to the lower animals and helpless children, but the or
organization that exists that makes it a specialty to see
the enforcement of those most humane and necessary la

is the Ohio Humane Society. But this Society is constantly crippled in its work by want of funds. Considering the very many liberal people in Cincinnati, is not this fact surprising? It is not, however, when it is considered that at every turn a liberal man is urged to give money for some object or other.

But we may speak of this subject at another time.

DEFORMED NOSES.—J. B. Roberts, A. M., M.D., Lecturer on Anatomy in the University of Pennsylvania, has sent us a pamphlet entitled, "The Cure of Crooked and Otherwise Deformed Noses." It seems from a perusal of this little monograph that the many who have deformed and distorted nasal appendages can have hope of finding a remedy.

In the pamphlet are a number of cuts representing various deformed noses. We wish we had the engravings, that we might be able to exhibit them to our readers. 1st, There is the "saddle-back nose," which from a point between the eyes and the end of the nose is a curve similar to that in the seat of a saddle. 2d, Is the "tuberous nose," which looks like as if it had an apple stuck on the end of it. 3d, Is a representation of an "angular nose." In this figure the organ is represented in the opposite condition from that of the *saddle-back nose*—it has a convexity in the center, like a bump, instead of a concavity. 4th, A good-looking face has the end of the nose turned to one side—a "bent nose." 5th, Is a figure of a "twisted nose," which is a nose having the central part pushed to one side, so that one side of the appendage is convex while the other is concave.

"These," says Dr. Roberts, "are the ordinary deformities which are observed in the contour of the dorsum or bridge of the nose. In the twisted and bent noses there is usually some septal distortion, because the condition, as a rule, is the result of injury. When there is septal deviation there is usually some interference with respiration, for the reason that one nostril is more or less occluded. This causes change in the tone of the voice and induces other well-known symptoms."

It seems that different persons are differently affected by deformed noses. Says Dr. Roberts: "Some persons are more annoyed by the nasal obstruction than by the want of physical comeliness in the external organ. Others care little for the want of patency of the nostrils, but worry greatly about the unsightly appearance of the deformed nose

There are many methods of relieving nasal deformitie If the bridge is sunken, it must be raised and supported b the intra-nasal tissues. If the nasal bones are destroyed b syphilis, they must be substituted by new tissne, which usually the tissue of the cheek or forehead, with possib periosteal or osseous structures taken from the fron region or from a lower animal. If there is a protuberan at the tip of the nose, it must be cut out and the two sid brought together so as to form a respectable-looking lob If the septum is bent over, it is necessary to open t occluded nostril, straighten the septum and keep it in t median line. Superficial scars can sometimes be relieved b scraping away the irregularly cicatrized surface, since t irregularity in the cicatrization often looks worse than large smooth scar would. A greater degree of damage w require for its repair the best efforts of a skilled plast surgeon.

Really, there is a large amount of information in this lit pamphlet worth knowing. It is worthy attentive perus

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The Trustees of the Johns Hopkins Hospital have auth ized the issue of a monthly publication to be known as t *Hospital Bulletin*. It will contain announcements of cours of lectures, programmes of clinical and pathological stud details of hospital and dispensary practice, abstracts papers read and other proceedings of the Medical Society the Hospital, reports of lectures and all other matters general interest in connection with the work of the Hospit Nine numbers will be issued annually.

The subscription price will be one dollar. Subscriptio may be sent to the publication agency of the Johns Hopki University, Baltimore, Md.

Accident Insurance That Does not Insure.—We c the following from an article which appeared in a rece issue of the *Medical Record*, of New York, contributed b H. A. Riley, Esq.

"There are some accident policies which do not seem insure against accidents. Here is one of them, as found a New York case where the Preferred Mutual Accide Association was defendant. The policy stated that pa ments would be made to a member injured through 'ext nal, violent, and accidental means,' provided said memb shall 'sustain bodily injuries by means as aforesaid which shall, independently of all other causes, immediately and wholly disable and prevent him from the prosecution of any and every kind of business pertaining to the occupation under which he receives membership.' The insured was a retired gentleman having no occupation, who injured himself while operating a buzz-saw at the shop of a wagon manufacturing company of which he was a stockholder and director. As a result of the injury he was obliged to carry his arm in a sling, and was deprived of its use to some extent for several months. Under these circumstances the company refused to pay the policy, and in a lawsuit the court declared they need not pay it."

The policies of all Accident Insurance Companies read, we believe, as follows (there may be a little variation in some of them, but it is not material): "The sum of $—— to be paid to ———— or his legal representatives within ninety days after the receipt of satisfactory proofs that the said insured has sustained during the continuance of this policy, bodily injuries inflicted by external, violent and accidental means, within the intent and meaning of this contract, and the conditions hereunto annexed, and such injuries shall, independently of all other causes, have occasioned death within ninety days from the happening thereof; or if the said insured shall sustain bodily injuries, by means as aforesaid, which shall, independently of all other causes, immediately and wholly disable and prevent him from the prosecution of any and every kind of business pertaining to the occupation under which he is insured, then, on satisfactory proof of such injuries, he shall be indemnified against loss of time thereby in the sum of not exceeding $—— per week, for such period of continuous total disability as shall immediately follow the accident and injuries aforesaid, not exceeding —— weeks."

A large majority of accident insurance companies limit the number of weeks for which they will pay weekly indemnity on account of disability to twenty-six weeks, but the Equitable Accident Company, of Cincinnati, pays for fifty-two weeks, if the injured party should be disabled for that length of time.

Accident Insurance Companies like Fire and Life Insurance Companies must have conditions expressed in their policies for their self-protection. If such was not the case, no insurance company of any kind could exist long. But where conditions are stated, now and then it will happ that, if they are rigidly enforced, injustice will result. V have in mind of hearing at one time of a building that w insured against loss by fire, in the policy of which there wa condition that no fire was to be permitted upon the premis Before the expiration of the policy the building was destroy by fire. On application for indemnity it was refused for t reason that there was evidence a fire had been made in stove or fireplace for a brief period for some necessary p pose, although the burning of the building had not result from that fact—the courts sustaining the insurance compa in its refusal of payment.

But an honorable insurance company, whether it be accident, fire or life insurance company, will not take adva tage of legal loopholes through which to escape fulfilling moral obligations, no more than an honorable gentleman w take advantage of any opportunities afforded by the law avoid paying an honest debt. But it may be asked, how it to be known whether a certain insurance company is honorable one or not? The reply is, learn the character its managers—what their standing is in the business co munity. A prudent person informs himself in regard to t reputation of an individual before he entrusts to him mu that is of value.

Now and then a person is found who, though he may n be a loafer, has no occupation. There are a very few in viduals who, having sufficient means to supply their want pursue no profession or business. If such a person shou take out an accident insurance policy, and afterward me with a severe injury, though he should be confined to h bed thereby for a number of weeks, he could not, accordi to the report of Mr. Riley, which we have quoted from t *Medical Record*, collect any indemnity, on account of d ability, by means of a suit before a court of law. Althou he may have fractured a leg, and unable to get out of h bed, yet he was not "immediately and wholly disabled a prevented from the prosecution of any and every kind business pertaining to his occupation," for he has no occ pation.

But, as we have stated, no honorable accident compa will take advantage of any quibble or loophole, to esca from meeting its obligations. We have known physicia who, having met with an injury—such as a fracture of arm—were disabled from pursuing the practice of their pr fession in great part, yet could sit in their offices and be consulted by their patients, and consequently were not "*wholly disabled* from the prosecution of any and every kind of business pertaining to the occupation under which they were insured," like a laboring man or mechanic would be under the same circumstances, yet were paid indemnity by the company in which they were insured for an equal number of weeks. By law, however, in consequence of not having been *wholly disabled*, they could not have compelled payment.

The *Preferred Mutual Accident Association*, which took advantage, as stated by the *Medical Record*, of a strict interpretation of the conditions expressed in its policies, to avoid paying indemnity which it owed to one of its insured, opened an agency not long since in Cincinnati. Dr. Wm. Judkins informs us that he was officially connected with it, believing it to be at the time an honorable organization. They made claim, he says, of insuring physicians. Having become cognizant of their crooked manner of doing business he resigned. He thinks that if many who still hold policies in the concern were aware of how certain physicians failed to collect claims, they would drop their policies and "go into something reliable."

Because many fire insurance companies have defrauded those who patronized them, believing in their integrity, that fact does not prevent owners of buildings continuing to get them insured; now, because some accident companies have swindled many who have unwarily had confidence in them, is it any the less true that such organizations have been a great blessing to thousands, among which are hundreds of members of the medical profession. No physician, in our opinion. should neglect insuring in an accident company, and having his clients do the same.

THE LATE M. RICORD.—Among the last acts of Ricord's life, says the *British Medical Journal*, was the ascent of the Eiffel Tower, and his death was hastened by his coming from Versailles to Paris to vote for the Republic in very inclement weather. Having to wait on the platform, he contracted a severe cold, and was attacked with double pneumonia. Only a few days before his death, one of his friends, on seeing him, said to him: "*Mais, mon maitre, vous avez bonne mine.*" His characteristic answer was: "*Mon ami, je ne vous conseille pas de prendre des actions dans cette mine-là.*" A charming *calembour*, which showed that to the last he retained all th brightness of his inimitable wit and gayety of spirit. H kindness to young men, his generosity to the poor, his hear welcome and unbounded liberality to foreigners, and his co dial hospitality to all English visitors, did much during life to render him and his profession popular with all visitor

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WRITING INK.—Some thousands of dollars are sent eve year from Cincinnati to England, for Arnold's inks. Fro all the large cities of the United States the manufacture must receive tens of thousands of dollars. And of what the ink made, that thus draws so heavily from this countr We have been informed that its constituents are comm commercial copperas (sulph. iron), gall-nuts, and sulpha of indigo (indigo dissolved in sulphuric acid).

But whether the formula we have stated is correct or n we consider it absurd to suppose that we, in this countr can not make our own inks, but must send to Europe f them. If we in this country can make carriages, watche clocks, pianos, organs, and many other articles, of suc quality and cheapness that Europeans are glad to buy the of us, we ought certainly to be able to make our own ink But it seems that thousands of our own people think not.

We have no interest in any ink manufactory, and have acquaintance with any one who has. We are led to wri on the subject of importing foreign inks, in consequence recently being in an importing house in Cincinnati, whe we saw piles of boxes containing hundreds of quart bottl of Arnold's ink, and could not help but think that many tho sands of dollars were needlessly sent out of the countr Can we not make good ink in this country? Certainly can. No better is made in the world than is made right he in Cincinnati. Woodmansee's ink is equal to Arnold's every feature that belongs to a superior ink. So also is Ca ter's ink, which is made, we believe, in New York. We not know either of these manufacturers, but we have boug their inks and used them with satisfaction. We had a bott of Arnold's ink last summer, but was compelled to throw away on account of its molding, though warranted not mold.

WE call the attention of our readers to the announceme in this number of Dr. Sutton's Private Sanitorium. Th record of this institution is most excellent.

THE
CINCINNATI MEDICAL NEWS

VOL. XXII. NO. 264. Old Series. } DECEMBER, 1889. { VOL. XVIII. No. 12. New Series.

Original Contributions.

The Nervous System in Disease. A Preliminary and Fragmentary Contribution to the Study of General Neural Pathology.

BY C. H. HUGHES, M.D., ST. LOUIS.

Read before the Medical Association of the State of Missouri.

THE part the nervous system plays as the essential factor to the development of what we are accustomed to call disease in animals, but which are in reality the secondary patho-physiological changes and chemical and mechanical dissolutions that follow the toxic shock first received by the central cell life and nervous system, and which has transformed it from a neuro-physiological to a neuro-pathological condition, is plainly shown in the action of those poisons, animal, vegetable or mineral, which especially and immediately affect the nervous system, as well as in those chemical poisons which directly damage and destroy tissue and injure the nervous system through dissolution changes effected in the blood which nourishes and sustains it.

In all cases of poisoning we see no constitutional or systemic disease until the central nervous system feels or shows the presence and morbific power of the toxic agent. Take, for example, the poison of the crotalus or rattlesnake, and I know of no better authority on the subject of its action than Dr. Alfred Drysdale, whom I here quote:

"The actively poisonous constituent of the crotalus venom is an amorphous yellowish-white powder called by Mr. Weir Mitchell *crotaline*, which is a compound analogous to pytaline, pepsin, etc. It can not multiply or propagate itself, as is the case with the poisons of smallpox, vaccine, syphilis, and septic pus, but its action more nearly resembles that of a catalytic ferment. The venom is albuminous, possesses an acid reaction, a sp. gr. of 1.044, coagulates at 160° F. miscible with cold water and glycerine, alcohol coagula it. Nitric, hydrochloric, sulphuric and tannic acids, chlor water, solution of iodide of potassium, bichloride of mercu sulphate of soda and magnesia, all give precipitates. virulence is not destroyed by dilution, boiling, freezing, drying, or by keeping in a dried state. The coagulum p duced by boiling is innocuous; on the other hand, coagulum produced by the addition of alcohol possesses the virulence of the original venom.

"The venom contains an albuminous body, crotaline, coagulable at 212° F.; an albuminoid coagulable at 16 coloring matter and extractives soluble in alcohol and fa matters, chlorides and phosphates.

"Crotalus poison acts in the same manner on all anim Strong men have died from its effects within a few minut dogs, rabbits and guinea-pigs have been killed within minute, pigeons in less than half a minute, and small bi in a few seconds.

"The operation of the virus is manifest immediately within a minute, whether it is administered by injection i a vein under the skin, into the peritoneum, or into trachea. The effects in large dozes are rapid and destr tive in the extreme; within a few minutes the skin become mortified; within a few hours the tissues, to a c siderable depth, have become almost fluid with decomp tion and soaked with liquid blood; the latter is so p foundly changed in character that even before death it lost its power of coagulation; immediately after death blood is found perfectly diffluent throughout the body. *the blood be examined in a case immediately fatal, no cha whatever in its appearance or structure is detectable.* *
* * * * * * * * * Wh
however, death has been delayed some hours, evident grave structural changes are discernible—notably destruction of the fibrin; the blood has become so difflu that it can be poured from one vessel into another like wa Even during life the blood loses its power to coagulate, corpuscles no longer arrange themselves in rouleaux. color becomes dark, even in the left side of the heart, ow either to the changes in the quality of the blood or in tissues themselves; ecchymoses, due to extravasations, found in the various organs, if the animal stung had live sufficiently long time.

"Death results from one of the following causes: 1. *Shock, in those cases immediately fatal without detectable lesion.* 2. Putrefacient action on the blood and tissues after the lapse of some hours. 3. Secondary absorption of decomposed matters after some days.

"In a fatal case there is at first, usually, a cry as of pain or terror, with shuddering, and perhaps an attempt at vomiting, followed by extreme debility, giddiness and fainting; the victim staggers and falls, and is unable to stand or sit up again. Pulse extremely rapid, irregular, or imperceptible; eyes sunken; body œdematous; face swollen; skin jaundiced, cold, and covered with perspiration. Delirium, sleeplessness, torpor, or coma; voice whispering; dysphagia; intense thirst; incessant and bloody vomiting; stools diarrhetic, dysenteric, and involuntary; micturition involuntary; urine albuminous and bloody; vesications from the skin; the limbs or the whole frame tremble and are convulsed; the extremities become cold; the patient speechless and unconscious, and finally dies. In milder cases similar symptoms are present in a less degree, and recovery is rapid and complete. Within a few days the patient is restored to his usual health, though he remains weak for some time."

Here you see a typical and most powerful poison killing by the almost instantaneous shock, and before any detectable change could be observed in the blood by the most searching and skillful eye or the strongest lens. Those who do not see, as we do, *in the nervous system* the *physiological barrier* wall that ever stands in the animal organism between active and manifest disease and organic health, must of course invoke some conjectural explanation, such as the writer from whom we quote invokes to explain the fatal stroke; but why invoke the unseen and improbable when you can see in its functional failure, or sudden cessation of its normal power, that the nervous system is directly stricken by the toxic agent, and life, of which it is the highest and final representative in the human organization, ceases in consequence of the stroke.

Indirectly only is the blood the life of the organism. All normal organic functuation depends upon the persistent integrity of the animal nervous mechanism; so long as that is preserved in a perfectly healthy manner, there can be no perceptible disease, no matter what the state of the blood. In the nervous system is the organized and final principle of life, and in its inherent power of resistance to assaults from within or without the blood-vessels, abides either longevit brevity of existence in the individual. An inherently endowed central nervous system—cerebro-spinal and g lionic—will resist for a time a physiologically, chemicall toxically impoverished and depraved blood, and the stat this same system, omnipotent in some organisms so lon it can find even a little nourishment in the blood to appro ate to its nutrition, makes the blood, or, if damag depraves it; though it is most true that neural integ can not long persist when the blood is totally and for a considerable length of time depraved.

There is a well-known condition of the blood, first descri by Virchow and Bennett in 1845, and more plainly sh by Ehrlich than by any of his predecessors, which may caused by malaria, protracted nervous exhaustion, gr neuratrophia or profound nervous shock. It is ca leukemia. Now, if we follow Ehrlich in our examinatio the blood of a leukemic patient, we will find three form colorless cells under our lens, namely: (*a*) Large cells, large and sometimes double nuclei, similar in appearanc cells found in the medullary substance of bone; (*b*) c smaller than the normal corpuscles, frequently contain broken-down nuclei, and (*c*) large colorless cells which Ehr has named "Eosinophil," because their protoplasm take the eosin coloring. These latter, Rindfleisch maintains, cells which have not fulfilled their physiological task, remain on the half-road to red blood corpuscles. If this be due to nervous shock or nervous exhaustion, what co tions may not depend on nervous depression or profou neuratrophia, or upon a violent or gradual suspension central nerve function?

On the other hand, the well-known resistance of cert organisms to the inroads of time or starvation or the destr tive processess of suppuration, septicæmia, toxic pois and mechanical violence, are proofs of the abiding preponderating vital tenacity of the nervous system, and power and capacity of this paramount and superior of all anatomico-physiological systems of the human vito-mech ism to claim and secure nutrition from the blood so lon the smallest quantity of reconstructive pabulum remain the blood. It has its law of reconstruction as well as of integration, and that law does not abide in the blood, tho states of blood more or less influence and determine (an some organisms much more than others) states of the nerv system. The blood feeds or starves it, but it is well or poorly fed according as it demands nutrition from the blood.

In some organisms the nervous system is so unstable in some of its cerebral or spinal or ganglionic centers, that the slightest lowering of the standard of the quality of the blood, as by a short fast or slight fever, causes disordered function, as convulsion or delirium or tremor, while in others great sanguine depravity may for a long time be sustained without the fact being signaled by any symptom of brain or cord or ganglion that markedly attracts our attention. A certain organism with inherent inability to secure its needed nutrition in the ganglion cells of the cerebral cortex, for instance, is deprived of food for a few days, and the deprivation of accustomed nutrition is soon revealed in an attack of insanity, while a Tanner or a Succi endures a fast of forty days or longer without a sign of delirium.

Another, whose insanity prompts him to refuse food—lives for weeks without nourishment, the disordered psychical center securing enough nutrition from the blood to sustain it in aberrant activity, but not enough for repair, while the other parts of the body continue to secure their own, for long time performing, in a measuure, their functions, while the blood grows poorer and poorer in material for reconstruction.

On the subject of fasting Forbes Winslow has given us the following record:

The longest time recorded in the annals of physic in which a man existed without food was sixty-one days, the case being that of a young man driven mad from overwork. Alexander Benedictus mentions a case at Venice where a man lived forty-six days without food. The history of France states that Louis the Pious, Emperor of France, who died in 840, existed forty days without food or drink. Albertus Magnus gives us the record of a woman of Cologne, who lived seven weeks only on water. It is said that Democritus lived to the age of 109 years, and that in the latter part of his life, for forty days, he lived on smelling honey and hot bread. Raulin relates another case where fifty-two days of fasting took place on water alone. The *Medical Gazette* for July, 1883, contains two remarkable instances; one of these, a patient, is stated to have lived six years without swallowing any food, the mouth being occasionally moistened with water, tea or whey, which was not swallowed, but spat out. In the other case, which was originally recorded by Prof. Ricel, of Turin, an inability take food existed for three years. There are many tra tions in all histories relating to the means employed by va ous individuals to support life during danger and privati The Indians of Asia and America, when they are bound a long journey where there is a possibility of such a state affairs existing, prepare themselves for emergencies follows: They mix the juice of tobacco in the form of sm balls, which they retain in their mouths. The gradual so tion serves to counteract the uneasy craving for food, having been proved by experiment that clay introduced ir the stomach relieves hunger. In 1770 a woman living Yarmouth created considerable excitement and amazem in the world. She was reported to have lived for sev years and a half without tasting food, her lips only moi ened with water.

The manuscript department at the British Museum co tains a quaint description of the fasting of Jane Hodg (Sloan MS., 4811). She lived in the year 1669. S suffered from hysterical aphonia, and neither ate nor dra for nine weeks, so it is reported. She was under a delusio and stated that "she fasted for the sins of the peop and that she was the savior of the nations." She ultimat recovered and took food. In 1870 we read of the "Lanc shire fasting girl," Ellen Sudworth, aged 11. This is, ho ever, not one of clear abstaining from solid food, as she liv on liquids and soups.

Now, if the blood alone were the immediate life of t organism, and the nervous system had no inherently orga ized conditions for perpetuating its own vitality by drawi on the blood (no one doubts the ultimate dependence of animal life on the blood), how are we to explain this l persistence under such nutritional deprivation as has be indubitably proven, after making all due allowance for t fiction that may surround the history of some histori fasters, except upon the fact that the nervous system, or fully organized and built up, becomes not only a law ur itself but a law unto the whole—a law-maker and executi of physiological law? Its vital power and endurance a resistance becomes something inherent and not immediat dependent on the blood, except when the blood is ext ordinarily depraved, though from the blood it receives all t possibilities of its power. It undoubtedly has the power some organisms of getting more from the blood than others, and of transmitting greater power of appropriation and resistance and control in some organizations than in others.

This is determined in the primordial cell or protoplasm which predestinates the character and power of the nervous organism, as of all other organisms, to endure and appropriate for endurance and resistance from the protoplasm, as the protoplasm takes from its fountain source, the blood. Herein resides the increased or diminished resisting power of organism in the presence of disease-exciting influence, and lower down, but under its influence, resides the vincibility or invincibility of cells to the direct causes of disease, and by the term "causes of disease," I mean what are often termed diseases, viz., bacilli, malaria germs, atmospheric conditions, etc.

The protoplasm and the cells of the ovum precede the blood, though they subsequently draw their life from it.

The explanation of the immunity secured by M. Pasteur's inoculations, by the vaccinations of Jenner and from recurring attacks of contagious exanthemata by a previous attack successfully withstood, is in the trained and developed power of resistance acquired by the central and ganglionic nervous system. The immediate chemical changes take place in each re-vaccination as in the first. The immunity of acclimatization is brought about in the same manner by the gradual drilling of the resisting power through long residence in latitudes in which death-dealing epidemics prevail. It is thus that yellow fever in the South is called the strangers' fever, because when a stranger goes where it is, at a time when it is epidemic, he is overwhelmed and the nerve centers of organic life succumb to assaults which those of the vigorous acclimated citizen withstands without harm.

The same fact underlies the adaptability of the organism to the demands of extraordinary physical exercise or labor. If the central nervous system, in those portions of it which preside over and respond to the demands for nutrition and development, does not grow in power, a condition of local hypertrophy with a central neuratrophia and consequent exhaustion results and heart failure from inadequate central innervation follows. The central reconstructive and sustaining forces fail to respond to the demands of the peripheral mechanism for more power, and collapse and death follow. The reciprocal balance between muscular nutrition and power and central nerve power are no longer sustained.

The old maxim, "*ubi irritatio ibi fluxus,*" as applied to th reciprocal response of the vascular system to the demands c the muscular, through the presiding vaso-motor nervou mechanism, is no longer possible of perfect execution, whe central sustaining power ceases to keep pace in developmen with peripheral muscular demand, and if the over-exercise muscles get what they demand, some other and more vit part, as the heart, robbed of its vital innervation, suddenl suspends or gradually fails in function.

Auto-toxication. If we turn now from poisons from without to poisons from within, we find that within certain limit the excretory poisons serve to stimulate physiological actio in the nature of combative resistance. The biliary salts an coloring matter in excess in the blood increases the activit of the kidneys and hastens excretion, so as to prevent, i well endowed organisms whose ganglionic organisms respon well, the overwhelming of the system.

The salts, too, which it is the function of the kidneys t excrete, if in excess in the blood, excite corresponding excretory effort in certain well-endowed organisms, while other neurally defective, succumb to auto-toxication.

Those poisons made remotely from the blood, which th kidneys and other excretory organs constantly drain of exist in other form in the plasma of the blood and late formed tissues in such proportions that they would finall overwhelm the most powerful organism.

A sudden increase of ten times more than normal woul probably overcome the neural resisting power of almost th strongest organism, *but it is the power of central neural resistance that constitutes the health of the individual.* It is whe this fails or succumbs that disease and death appear. Th mere presence of poisons in the system is not disease, bu the inroads they make and the damaging and embarrassin effect on physiological function, constitute disease.

The lower intestinal contents are toxic in character, bu some organisms are affected by the toxicity of fecal matte sooner or more profoundly than others. There is a vas difference in the facility with which intestinal conditions affec organisms, as there is in the facility with which inadequat urinary secretion and retained urea influences the brain t cause narcosis or convulsion.

Cerebral and cerebro-spinal and ganglionic health, lik general bodily health, is high in proportion to the degree o resistance it displays to the ordinary deleterious effects of adverse environment.

The most highly endowed nervous center will claim and secure from its vital pabulum, the blood, the essentials for its sustenance so long as there is any material existing in the blood free from toxic disintegration capable of sustaining life. This is the vital tenacity which differs in different organisms. It is the inherent resistance and natural tolerance of organism, the true *vis medicatrix nature*. It resides primarily in the germinal cell. It is the heritage of the best constitution, and the final endowment of a good physiological lineage, ancestral and evolutional. It makes disease more or less difficult of lodgment in the organism and postpones the day of dissolution. The essence and secret of longevity and disease-resistance is in the inherent and developmental endowment for perpetuation of its own vitality, of the central neural mechanism.

We need not pursue the subject further to see how essential it is to consider the neural factor in the study of disease.

The nervous system is king, and man is never conquered or dethroned by the assaults of disease till the nervous system surrenders.

Malaria is powerless, the cholera bacilli are futile for harm, typhoid makes no fatal inroads on the citadel of life, till the incursions of these morbid marauders break it down.

The same is true of the bacillus of phthisis and the virus of every fever. The structure stands defiant, and the physician hopes in the *vis medicatrix nature*, so long as the nervous system holds the fort.

The nervous system is the central executive and universal sentinel system of the organism. It is both legislative and executive of the body physiological, and exercises its veto or restraining power over both physiological or pathological processes, according as our nature and science train it. It has its subordinate, tributary, sustaining force in the glandular, vascular, osseous, and secreting and excreting systems; but it commands and regulates them all, though they undoubtedly influence it, as citizens of the state may disturb the king.

We are fast approaching that era in medical observation and thought when the neural pathology must reign high, if not paramount; when the observation of Cullen, made in another century, is to be verified anew by universal medical testimony, for the phenomena of disease are much the same

to-day as they have been in the past, only we may now s
further and broader, and the common medical mind m
now see plainly what the geniuses of the past but dimly d
cerned.

Quantum ego quidem video motus morbosi fere omnes a motibus in syste
ate nervorum ita pendent, ut morbi fere omnes quodammodo Nervosi di
queant.—*Cullen's Nosology: Book II., page* 181. *Edinburgh edition*, 1780.

From this cursory glance at a field as broad as our ev
expanding science, we are prepared to see how it is possibl
for some of us at least, to look upon certain diseases
belonging to the nervous system, whatever their gross
appearance, such as the numberless cutaneous neuroses, le
rosy, hyperidrosis, osmidrosis, etc.; to regard the phenom
non of fever as a neural disturbance, glycosuria, Ranauc
disease and hæmophilia; the neuratrophic sequelæ of go
and rheumatism, noted away back by John Hunter; t
motor, trophic, vasomotor and sensory paralysis of malari
asthma, hay fever and the numberless toxic peripheral nu
tides.

Look carefully over the vast field of disease, as the resear
and vision aids of our science, unfold it to us, and though v
see bacilli in numbers and varieties never before discovere
swarming about the damaged physiological edifice, as we s
carrion about a carcass, rats running from a sinking shi
and thieves as well as honest-intentioned men gathered abo
a wreck, where human life or property abides, and can n
fully explain the purpose of each, whether scavenger, par
site, burglar, or incendiary; we see one thing plainly, if v
look at organic destruction from its pre-physiological stan
point, and that is, that the most sustaining part that had
give way before destruction could be possible, was the ne
ral mechanism that binds and keeps in harmonious fur
tional activity and normal relationship, the various parts
the human organism; and we see in the flood of light whi
modern science has shed over the whole field of Medicin
the clear translation of the significant words of the physici
of the past above quoted, namely, from all that we can s
of the movements of disease in the human body, these mov
ments are so dependent on the nervous system as to entit
them, in a manner, to be called nervous.

And we are calling a great many diseases nervous no
and understanding them better and treating them more su
cessfully than our ancestors did.

Translations from our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

HYPODERMIC INJECTIONS OF CAFFEINE IN THE TREATMENT OF POST-PARTUM METRORRHAGIA. BY DR. CHAS. MISRACHI (SALONICA).

WE are all in accord as to the excessive gravity of the metrorrhagia which sometimes follows delivery, and the great number of means and measures recommended and proposed to combat the same are sufficiently well known to prevent me from enumerating them. I shall limit myself to recalling to the memory of the reader that in the treament of post-partum hemorrhage three grand categories of indications should guide the practitioner in the choice of his measure wherewith to combat the same.

1st. *The causal indication*, certainly the most important; *sublata causa tollitur effectum*. Evidently if the hemorrhage comes from a laceration of the cervix or from a varicose vaginal vein, we certainly lose time if we address ourselves to the uterine cavity, but, even leaving aside eventualities of this species, it is also very evident that (as occurs frequently) when the hemorrhage is the result of retention of a fragment of the placenta or of the membranes, of a retained blood clot or of uterine inertia, the most certain and radical measure for the arrest of the hemorrhage is the extraction of the offending foreign body in the first case, the excitation of the uterine contractions in the last. The best means to accomplish these objects are, without contradiction, the introduction of the hand into the uterine cavity to extract the foreign body it may contain, the subcutaneous injection of ergotine or ergotinine of Tarret, and uterine irrigation with a hot antiseptic solution. It is to these measures that we should *always* address ourselves; that is, *if we always had the time and means*. It is possible. that we may not have them; either because we have been surprised by a hemorrhage fondrayante, or because we have been called in after the event set in. Under these conditions there is great peril in delay, and we must urgently give attention to the

2d. *Symptomatic Indication*. The blood flows in streams; it must be arrested at any price, and after this has been accomplished, then we may proceed to look for the cause, and to remove it if possible. To respond to this indication there is but one measure, which is simple, rapid, easy o application, at the command of every one, and of a heroic, absolute efficacy: The compression of the aorta. I shal not delay upon this point, as it has but lately been the subject of an extended memoir by Dr. De la Torre, and published in this journal. It is sufficient for me to say that I have frequently resorted to it, and always with the greates success.

Nevertheless, the indications, one or the other, being responded to and the hemorrhage arrested, the role of the physician is not yet finished. It is well known that the organism supports badly instantaneous losses even when no excessively abundant. The physician must therefore be prepared to obviate the grave symptoms of which the acute anæmia of the nervous centers is the most important facto (lowering of temperature, lypothemia, syncope, etc.,) and which may, if care be not taken, entail a fatal issue. It is not rare to find reported in the journals cases where females have succumbed several hours after all hemorrhage had been arrested. We have therefore the

3d. *Indication, derived from the general condition:* Afte having lowered the head so as to augment the afflux o blood to the brain, and after the woman is well covered and surrounded by bottles filled with hot water or hot sand-bags so as to bring back the peripheral warmth, the general diffusible stimulants, like coffee, tea, grog, etc., are resorted to But these means, though undoubtedly commendable, have two disadvantages; namely, of acting too slowly, and of provoking or better facilitating vomiting, to which the patient is only too much predisposed by the anæmia of the nervous centers. A great progress was therefore made when the hypodermic injections of sulphuric ether were proposed in place of the other remedies, and I believe myself justified in advancing the proposition that the hypodermic injections o caffeine are still more efficacious.

The therapeutic use of caffeine reached such a great exten in France since the works of Gubler, Lepine, Girand, and especially H. Huchard, who, after having confirmed the beneficial action of this drug in certain cases of heart disease extended its use to all cases, of whatever etiology, in which the force of the cardiac muscular fibre appeared enfeebled Taking advantage of the happy idea of Tanret of dissolving caffeine by combining it with benzoate of soda, which per mits of large doses being injected under the skin without any appreciable inconvenience (*), he noted in 1889 the utility of the injections of caffeine in all the adynamic states (typhoid fever, pneumonia, adynamic and senile, diabetic coma, convalescence, overwork, etc.,) and he has insisted upon this on several occasions.

These facts have been confirmed by several observers, and especially by Semmola, Gempt, Stiller, and finally by Moncarvo, who has introduced the injection of caffeine into infantile therapeutics. From the perusal of these works the idea occurred to me to resort to caffeine to combat the disastrous effects of puerperal hemorrhages, and I have been exceedingly well satisfied.

I shall certainly not enter upon any erudite discussion, nor lay claim to being the first to have used these injections in these special cases; it is very probable that many others may have done so before me. I shall only say that I have nowhere found any mention of it, neither in the journals nor in the special works. I must nevertheless mention an article by Dr. Després, the well-known surgeon of the Hospital Cochin, published in 1879 (*Després* TREATMENT DE LA METRORRHAGIE PAR L'INFUSION DE CAFE NOIR, in *Bullet. de Therap.*, 1879. It relates to three observations, of which one, a metrorrhagia following miscarriage, the second hemorrhage connected with a profound anæmia, and probably due to excesses of all kinds; the third an essential metrorrhagia (? ?) in a tuberculous woman. In all the three cases, after having failed with many other remedies, the administration of 5—6 cups of an infusion of black coffee produced a sort of intoxication and arrest of the hemorrhage. Dr. Despré adds at the conclusion of his article: "Perhaps it acts upon the uterine muscle stimulating its contractions after the fashion of ergot." The latest experiments and clinical facts seem to prove that black coffee and caffeine do not have the same therapeutic action, but in all cases this action upon the uterine muscle has as yet not been demonstrated.

(*). Formula of Tanret.

Benzoate of Soda, .	3 grms.
Caffeine, ...	2 grms. 50.
Aq. Destill., . .	6 grms. or q. s. for 10 centim. cub.

Each cub. centim. contains 25 ctgrms. of caffeine. The solution is to be made by heat.

My friend, Dr. H. Perera, who has also extensively employed the hypodermic injections of caffeine in puerperal metrorrhagies, believes that it has a direct action upon the uterus, and, moreover, a much more rapid action than ergotine. In fact, after having injected sixty to eighty centigrammes of caffeine in a case of metrorrhagia with uterine inertia, the uterus could be felt becoming hard under the hand as it contracted, and the hemorrhage was ameliorated. The fact is exact, but the explanation does not appear to me inattackable, and I am inclined to believe that the caffeine acts solely as a general stimulant, and that its action upon the uterus is only a secondary one. I do not therefore recognize it as a substitute for ergot, and in all cases use both remedies concurrently.

On the other hand, caffeine finds a special indication in puerperal metrorrhagias in the anæmia state of the nervous centers, the immediate and redoubtable consequent of an abundant hemorrhage. The experiments of Coppola leave no doubt upon the point: That at the same time that the caffeine acts directly as an excitant upon the heart-muscle, it produces in the brain a hyperæmia analogous to that produced by the opiates in general.

Therefore: Excitation of the heart-muscle and augmentation direct and indirect of cerebral irrigation; if we add thereto the rapid action, the exact dosage, the possibility o administering at once massive doses proportionate to the danger, the facility of administration whatever be the state o our patient, it must be admitted that the hypodermic injection of caffeine possesses many superlative qualities.

However, as far as rapidity of action is concerned, they are somewhat slower than those of ether. "They are less excitant than injections of ether," says Dr. Huchard, "but they are more powerfully tonic; they elevate the vital forces less rapidly, but they maintain them for a longer time; . . . the effect of ether injections is fugitive; they are more excitant than tonic, whilst those of caffeine are more tonic than excitant; . . . . . and if there be urgency for rapid action and association of the excitant with the tonic effect, it is well to resort to injections of caffeine combined with those of ether." It is exactly this that I am in the habit o doing; there is no thought here of substituting caffeine for ether, no more than for ergot. Each of these remedies addresses itself to a special indication which the others can not fulfill, and the three combined give results which could not be obtained with any one alone.

I ought now to report the clinical observations upon which every serious article should be based; but unfortunately the facts I could cite have not the value of demonstrative documents, *because I never used the caffeine alone*, and the motive for that is very simple. I have already said, when speaking of the good effects of the injections of caffeine in the treatment of post-partum hemorrhages, I did not pretend that they should replace all the other remedies employed up to to-day. The caffeine is only an adjuvant and nothing more; it should aid in the accomplishment of the general purpose, arrest the hemorrhage and obviate the evil consequences of the same. You can not expel a fragment of retained placenta with injections of caffeine, but they will give you the time to to search for it; or, if we do not want to or can not intervene, they will enable the patient to support the consequences of a hemorrhage until such time as they be spontaneously expelled. This is all that can be demanded of caffeine, and in about twenty cases that I have used it in the last two years, it has not belied its promises. In all the cases I have seen, under the influence of sixty to eighty centigrams of caffeine injected, in immediate sequence, the pulse becomes better, the forces and warmth return in a few minutes; at the same time the beats of the heart become more rapid, and under the influence of this general excitation the uterus contracts and the hemorrhage is arrested—at least, for the moment.

There remains but one point to consider from the practical standpoint, and which addresses itself more especially to country practitioners. Called most frequently when the hemorrhage has already set in, I find the woman in a grave syncopal state. In this condition we must not permit the least movement of the body. For long ago already Prof. Pajot denounced the dangers to which exsanguined women are exposed by merely changing their position. If I wanted to intervene immediately I could not; to make an intra-uterine irrigation, hot water is necessary, and there is none. On the other hand, the introduction of the hand into the uterus without preliminary disinfection, is excessively dangerous; especially if, as it occasionally happens, I have visited in the morning cases of diphtheria, of erysipelas, of variola, even puerperal fever cases—and as disinfection of the hands is an operation that takes some minutes, the woman may succumb whilst waiting. I take up therefore tha which is most urgent; by compression of the aorta I arre or moderate the hemorrhage; with caffeine and ether I giv to the woman new resisting power, and I thus gain th time to put the patient in a state to support a more radic treatment, and to obtain for myself the means wherewith t intervene according to all the rules of the art. It is in thes conditions that caffeine has rendered inappreciable service But to obtain these it is necessary to have caffeine, and w must not expect to find it at the bedside, nor spend th time in hunting for it in the pharmacies. I therefore alway carry a package of caffeine and one of benzoate of soda which find their place in my hypodermic etin, just as mo phine does. De rigueur, we should also have distille water, so as to more certainly avoid ulterior complication (indurations and abscess at the point of puncture), but mos frequently I do without it, saying to myself that it is wort while, in order to save the life of a woman in child-bed, t expose her to one or two insignificant abscesses of th abdominal parietes.—*Nouv. Arch. D'Obst. et de Gyn ecol.*

Selections.

A Plea in Favor of Early Laparotomy for Catarrh and Ulcerative Appendicitis, with the Report of two Cases.

BY N. SENN, M.D., PH.D., OF MILWAUKEE, WIS.

Professor Principles of Surgery and Surgical Pathology in the Ru Medical College, Chicago, Ill.

(*Continued from November Number.*)

INDICATIONS FOR OPERATION.

It may be stated as a general rule, to which there can b but few exceptions, that the appendix should be extirpate in all cases where from the symptoms and history of th case the existence of a localized destructive inflammato process can be surmised. From a diagnostic and practic standpoint all cases of appendicitis can be divided into tw classes: 1. Acute. 2. Chronic. There can be but litt doubt that most, if not all, acute cases are preceded by chronic lesion. The history of many cases, and the pathological conditions of numerous specimens corroborate this statement. A foreign body, for instance, may be present for a long time without giving rise to serious symptoms, but it can not remain for any length of time without causing a catarrhal inflammation and superficial ulceration. An ulcerative catarrhal inflammation may exist for a long time before it gives rise to acute symptoms, and when the acute attack makes its âppearance the inflammation has reached the peritoneal surface and the connective tissue underlying the appendix and cæcum; it is then no longer an uncomplicated case of appendicitis, as the primary inflammation has extended beyond the structures of the appendix, and has given rise to perityphlitis, with or without perforation. Chronic appendicitis is characterized by acute exacerbations of short duration, the attacks of greater or less severity occurring at intervals of a few months or weeks. Between the attacks the patient may be in perfect health, unless the attacks recur with great frequency, when impairment of the digestive functions produces general ill health. The most important symptoms which point to the existence of chronic appendicitis are localized pain and a circumscribed area of tenderness at a place corresponding to the location of the appendix. Simple appendicitis does not give rise to any appreciable swelling as long as the lumen of the appendix remains in communication with the cæcum, as the resistance of the indurated walls is sufficient to force the contents of the appendix into the cæcum. In persons with thin abdominal walls it is possible to feel the hardened and thickened appendix by making deep pressure while the patient is placed in a position that favors relaxation of the abdominal muscles. Tympanites is usually absent unless the appendicitis is complicated by circumscribed peritonitis. Rigidity of the abdominal muscles is absent as long as the inflammation is limited to the deeper structures of the appendix. During the acute exacerbations of the chronic form of the disease aside of the pain the general symptoms are not severe. The temperature is either normal or there is only a slight rise, seldom above 100° F. The pulse is only slightly increased in frequency, and shows none of the characteristic features which it presents in peritonitis.

Vomiting is occasionally present, but is not a constant nor even a frequent symptom. Constipation, which is usually present, is probably more the result of a change in diet, rest, and the medicines taken for the relief of p than the disease. The frequency of catarrhal and ulcerat inflammation in the interior of the appendix as compa with the remaining portion of the intestinal tract is probal owing to the anatomical location of this structure. T lumen of the appendix constitutes a cul-de-sac which is communication with the intestinal canal, but which is tually excluded from the fæcal circulation, hence it ser an admirable purpose as a reservoir for the collection, lo ization and retention of pathogenic microbes. That anatomical location of the appendix acts as a predispos cause in the etiology of localized forms of infection is dent from the course of the disease.

The inflammatory process remains limited and does extend by continuity to the cæcum, the extension of disease being only in a peripheral direction from the muc membrane to the deeper structures. In conclusion, it m be said that recurring attacks of pain in the region of appendix with a circumscribed area of tenderness over same point are presumptive evidences of the existence appendicitis, and if the other symptoms and signs point the same direction, treatment by abdominal section is in cated.

TECHNIQUE OF OPERATION.

As an operation for simple appendicitis always pres poses an aseptic condition of the peritoneal cavity, it is the utmost importance to secure by thorough antisep precautions an aseptic condition of everything that has be brought in contact with the wound. The field of ope tion should be disinfected by shaving and thorough wash with warm water and potash soap, after which a moist co press saturated either with a 1–2000 solution of sublim or a 2½ per cent. solution of carbolic acid is applied allowed to remain from the time the disinfection is ma the evening before the operation, until the patient is rea for the operation the next day. Immediately before incision is made, I am in the habit of washing the surf once more with one of the disinfectant solutions, and la with absolute alcohol. The instruments should be sterili by boiling for ten or fifteen minutes immediately before operation. The operator and assistants should disin their hands by washing thoroughly with warm water potash soap, and subsequently a 1–1000 solution of su mate. If everything has been rendered thoroughly aseptic, that is to be brought in contact with the wound, no antiseptic solutions will be necessary during the operation, unless perhaps for the disinfection of the stump after amputation of the appendix. Sterilized water is used for the sponges.

Incision. — The incision that renders the cæcum and appendix most accessible to inspection, examination and operative manipulation is one made parallel to the long axis of the ascending colon and cæcum. It should be about four inches in length and directly over the center of the cæcum, and extend to within an inch of Poupart's ligament. With a sharp scalpel the skin, fascia and successive muscular layers are rapidly divided without the use of any director until the peritoneum is reached. At this stage a pause is made in the operation in order to arrest hemorrhage, by applying hæmostatic forceps to every bleeding point. The forceps remain until the surgeon is ready to close the wound, when it will generally be found that ligatures are superfluous, as the compression and crushing of the tissues caused by the forceps have been sufficient to arrest the bleeding. By following this plan unnecessary ligation of small vessels is avoided. The peritoneum is picked up by two catch-toothed forceps, and between them the abdominal cavity is opened, and the incision subsequently enlarged to the desired extent between the index and middle fingers of the left hand. As soon as the peritoneal cavity is opened the further steps of the operation will be greatly facilitated by packing around the cæcum a small compress of aseptic gauze wrung out of sterilized water for the purpose of preventing prolapse of the small intestines. If the appendix is below the cæcum it will come into sight at once, when it can be examined and directly dealt with. If, as is more frequently the case, it is behind and toward the inner side of the cæcum, its size and direction can be readily ascertained by palpation through the cæcum; but to make it accessible to direct examination and operative treatment, it is necessary to raise the lower margin of the cæcum.

Excision of the Appendix.—If the serous coat has not been implicated by the inflammation, the only attachment to be separated is the mesentery of the appendix. This is always present, but varies greatly in length and width. If it is attached to the whole length of the appendix, it should be ligated in several sections with fine silk ligatures as far as the cæcum. If inflammatory adhesions are present, they

are separated and all bleeding points carefully tied. Wh
the appendix has been thus completely isolated, a ligature
fine silk is tied around its base close to the cæcum, a
about a quarter of an inch below it the section is made wi
scissors.

Treatment of Stump.—As the interior of the append
under such circumstances necessarily must always cont
pathogenic microörganisms, it is necessary to disinfect t
cut surface of the stump thoroughly. This can be do
with one of the disinfectant solutions, after which the stun
should be dusted with iodoform. After amputating t
appendix it has been heretofore customary to drop t
stump without making any provision against the possibili
of perforation, subsequently taking place at the point
ligation. This I consider a great mistake. The ligatu
approximates a diseased mucous membrane, and if after t
operation the entire stump is not speedily surround
by a wall of impermeable granulation tissue which is lat
transformed into a connective tissue capsule, there is gre
danger that perforation will take place after the cutti
through of the ligature, thus exposing the patient to t
same danger he was in before the operation. To obvia
the possibility of such an occurrence, the stump, after th
ough disinfection and iodoformization, should be cover
with peritoneum by stitching the serous surfaces of the c
cum from both sides over it by a number of Lembert s
tures. The serous surfaces will become agglutinated in
few hours, and in a few days the adhesions will have becor
sufficiently firm to protect the surrounding tissues and t
peritoneal cavity against extravasation should leakage ta
place at the point of ligation. By resorting to this preca
tion we protect the patient against all possibility of t
occurrence of perforative peritonitis subsequently, as t
perforation, should it occur, of necessity would take pla
into the cæcum.

Closure of Abdominal Incision.—More care is required
closing the incision made through the several muscu
layers of the abdominal wall than by going through t
median line, as the ordinary way of closing a median incisi
would be very likely to be followed by a ventral hern
The peritoneum must be sutured separately with fine c
gut or silk sutures, while the remaining sutures are pass
down to, but not through, the peritoneum. No provisi
for drainage is necessary in these cases.

Dressing of Wound.—After dusting the wound with iodoform a narrow strip of protective silk is applied over it, when it is covered with a compress of iodoform gauze and a larger compress of salicylated cotton, which are retained with a few broad strips of rubber adhesive plaster encircling two-thirds of the body. After this the whole abdomen is enveloped with a thick layer of common cotton over which a well-fitting binder is snugly pinned; this not only gives additional support to the wound, but furnishes likewise an agreeable and efficient support to the abdominal wall.

After-Treatment.—As it is advisable to move the bowels the day before the operation by a saline cathartic, and to empty the colon by enema the following morning, the bowels should not be disturbed again for several days after the operation. This can be accomplished by administering several ten drop doses of deodorized tincture of opium, and placing the patient on absolute diet for at least two or three days. On the third day a saline cathartic is administered, and, if necessary, this is followed by an enema. The sutures are removed at the end of the first week, but the patient is not allowed to leave the bed for another week for fear that the adhesions might yield and a hernia might follow. For several weeks after this he should wear some kind of an efficient abdominal support to guard still longer against the same accidents.

CONCLUSIONS.

1. All cases of catarrhal and ulcerative appendicitis should be treated by laparotomy and excision of the appendix as soon as the lesion can be recognized.
2. Excision of the appendix in cases of simple uncomplicated appendicitis is one of the easiest and safest of all intra-abdominal operations.
3. Excision of the appendix in cases of appendicitis before perforation has occurred is both a curative and prophylactic measure.
4. The most constant and reliable symptom indicating the existence of appendicitis are recurring pains and circumscribed tenderness in the region of the appendix.
5. All operations on the appendix should be done through a straight incision parallel to and directly over the cæcum.
6. The stump after excision of the appendix should be carefully disinfected, iodoformized, and covered with peri-

toneum by suturing the serous surface of the cæcum
each side over it with a number of Lembert stitches.

7. The abdominal incision should be closed by two ro
of sutures, the first embracing the peritoneum, and t
second the remaining structures of the margins of t
wound.

8. Drainage in such cases is unnecessary and should
dispensed with.—*The Journal.*

Nævus Treated by Injection of Alcohol.

THE treatment of nævus is various, and, if the old r
holds good, this fact proves that no method of treatme
yet invented is satisfactory in all cases. Dr. Holga
(*Archives of Pædiatrics*, June, 1889), describes still anoth
method, as far as he knows a new one, which has giv
satisfaction in the two cases in which it was tried. He fi
reviews briefly the best methods heretofore employed. T
compound tincture of iodine is efficacious when applied
small nævi, but fails to cure large ones. Tartar emetic, o
part by weight to four of galbanum plaster, collodion, col
dion with corrosive sublimate, and creosote, have all prov
satisfactory in some cases. Vaccination on the nævus cu
at times, as does also the application of caustic potash or
nitric acid, but all of these leave a scar which may be mo
unsightly than the nævus itself. Injection of perchloride
iron has been successful; but in a case cited ten minims pr
duced instant death in a child. Setons have wrought cur
sometimes, and cure has also followed ligation, after t
passing of pins under the tumor. Excision is too blood
and leaves a scar. The passing of a silver wire into the sk
around the nævus, and out again at the point of entranc
the wire being then gradually tightened, has cured witho
leaving a scar. Many other methods have been employe
one of the best being destruction of the growth by electr
lysis. The objection to this method is that it requires t
use of an electric battery and needs considerable practic
One of the latest suggestions is to apply the ethylate
sodium or potassium to the nævus. If the application
repeated from time to time, it will eventually effect a cur

In 1885 Dr. Holgate was requested to remove a pendulo
vascular nævus, situated outside the right ala nasi of a bo
four years of age. It was half the size of a filbert, soft ar

compressible, but swelling out quickly when pressure was relaxed. At birth it was a port-wine mark, level with the skin. It had several times bled profusely and persistently. Fearing hemorrhage and a resulting scar, if scarification were used, he determined to try the injection of ninety-five per cent. alcohol. Applying a common eyelid-clamp around the base of the growth, to arrest the circulation, he passed a hypodermic needle through its centre, longitudinally, near its base, and injected from five to seven minims of rectified spirits of wine, gradually withdrawing the needle as he injected. The tumor became quite solid. Finding it, a fortnight later, soft and much shrunken, he now passed the needle into the growth at a point from which its vessel-supply started. Six weeks later it was one-eighth its original size. It was injected again at this time, and a fourth time two months later. As the nævus had become so small, it was quite difficult on these last two occasions to pass the needle into the skin. Three years later, when this article was read, the nævus had become so reduced and the skin over it had returned so far toward its normal condition that an observer would see no difference in the alæ unless his attention were directed to the existence of the nævi. No treatment was now employed except painting the spot from time to time with glycerine. There was no scar, except at the point where it had previously ruptured spontaneously and bled.

The second patient, a baby, two months old, presented a nævus on the chest, which was at birth only a port-wine mark, but had rapidly grown into a vascular nævus nearly as large as that before described. The growth was encircled by a metal ring, and circulation to and from the part arrested. Alcohol was injected, as in the former case. But one injection was made, and this not only arrested growth, but caused its disappearence as a tumor. A month later it was level with the skin, and three-fifths of its surface had regained the normal color of the skin. There was no scar. The part which remained of a port-wine color spread a little during the next three months, but another injection or slight scarification would probably remove all the remnants of the nævus.

Encircling the growth by a ring is always to be recommended, as it confines the alcohol to the diseased part, and also makes it act more strongly. By contracting the vessels beyond the nævus, it prevents the entrance of clots into the circulation.

The syringe must, of course, be free from air when t injection is made. This method has the advantage simplicity, and the necessary apparatus is already at han

Dr. Holgate thinks that with ordinary care it is safe. H suggests its use in goitre.—*Med. Record.*

Treatment of Gastric Ulcer.

In a recent clinical lecture on gastric ulcer, Dr. Byro Bramwell, in speaking of the treatment of gastric ulc insisted upon the importance of giving the patient as mu food as is necessary for the purpose of nutrition, and t avoidance of all foods which irritate the inflamed and ulc ated stomach, and which produce pain or vomiting. Liqu food, and especially milk, fill these requirements, though t latter is sometimes not well borne, unless boiled or partial predigested with pancreatin. Half a teaspoonful, or a te spoonful, of the liquor pepticus given immediately after meal, is often useful in those cases in which it is not co sidered necessary to peptonize the food before introduci it into the stomach. In the severe cases in which peptoniz foods disagree, the stomach should, for a time, be placed absolute rest, and the patient fed *per rectum*. It is now w known that it is possible to support patients for long perio of time by means of nutrient enemata (milk, beef-te defibrinized ox blood) and nutrient suppositories. Nutrie enemata should be given in small quantities at a time, insure their retention, and when the rectum become irritabl a few drops of laudanum should be added to every third fourth enema. Potatoes, raw apples, meat and pastry a especially injurious. Tea is also bad.

The second indication is to administer remedies which w promote the healing of the ulcer. In ulcer of the stomac as in every other disease, one of the great principles whi should regulate our treatment is to remove the cause of t condition. Ulceration of the stomach is very frequent seen in chlorosis, and in such cases he has found arsenic the form of Fowler's solution, with a teaspoonful of liqu pepticus (Benger's), a most valuable remedy. Bismuth a nitrate of silver are also very useful in the treatment of ma cases of ulcer of the stomach. In others, where the pa after taking food is severe, a small dose of opium or morph given in the form of a pill, is of advantage. In cases whe there is distinct tenderness on pressure, the application of a blister is often beneficial.

In treating ulcer of the stomach, it is necessary to attend to the condition of the bowels. Cascara, or castor oil, may be given when medicine is required; strong purgatives should be avoided.—*Studies in Clinical Medicine.*

Sulphonal.

AT once upon my return from medical lectures last year—mid-October—I was attracted to various clinical reports respecting the use, value and safety of the new hypnotic sulphonal, presented by the last number or two of the *Therapeutic Gazette*, which the mail had brought during my absence. * * * * * Too hesitant as I may confess myself generally to be to prescribe a new drug, I found myself very strongly impressed by the arguments and representations adduced in support of suphonal; and availed myself of the first opportunity offered to try its action. The venture was repeated again and again, to such extent that I was already in position to form some opinion of the merits of the new hypnotic before several of my most active neighbors in the profession had realized its existence. To-day, with a ten months' record of nearly two hundred carefully-observed applications—*i. e.*, in as many different subjects—given for longer or shorter periods, to "all sorts and conditions of men," I am prepared to claim that sulphonal "has come to stay," and to prove—at least, this shall be my effort in the pages which follow—that it has already asserted its right to stand first in the class of hypnotics.

Almost from the first I have pushed sulphonal. In my moderate family practice I could not otherwise have had so wide an experience in its use. Moreover, I myself have tried the soporific probably as many as thirty times.

I repeat that I have rather pushed the remedy, and this for several reasons. 1. Some form or degree of insomnia is a frequent condition among my patients, consisting, as they do, chiefly of over-burdened business men and their no less burdened wives. 2. I was early impressed with the belief, and later was convinced that sulphonal is as valuable, as indispensable an addition to our therapeutic resources, as was chloral hydra. twenty years ago; and the latter, by way of comparison, is about as high a standard of medicinal value as could well be adduced, for, before we had chloral, t physician possessed no real hypnotic agent whatever. With increased observation of its action came increased surance of the credibility of the statements which accomp nied the introduction of sulphonal, viz., that when appli with fair intelligence the remedy is wholly safe. 4. Wi increased use, also, came increased confidence in adapte ness to purposes for which the drug was applied and sat faction with its results. And, finally, corresponding to gradually increasing demand for hypnotic interposition a relief, which my clientele, for some time past, had seemed present, had been a growing limitation in choice of hypno agents, and disappointment or vexation in their effects. just such state of perplexity sulphonal came to hand.

As respects chloral, both physiological and therapeu action had been generally good, but various disabiliti attend its employment. An effective measure of dosage i plies large bulk, demands free dilution, and insures a so tion too often offensive to taste, especially with the you and with the fastidious female. Its supposed tendency depress the heart raises an unpleasant question in case of t adult and senescent subject. But worst of all, a popu prejudice, largely created and fostered by the secular pre which knows nothing of that on which it presumes to p nounce judgment, has introduced a very serious obstacle the use of chloral. In a medical experience of fully twen five years, I am prompt to say I have never known anot drug prejudice both so unreasonable and disastrous in c sequences, and one so widely distributed, so strong entrenched among the intelligent of the country, as t which has controlled for many years past in respect of ch ral. I repeat, disastrous in consequences. Your patie has the utmost confidence in you and has long been wont obey your orders, but if you order chloral he is pretty s to know it (there is no plurality or choice of names in t instance, and doctors' Latin does not avail), and such disc ery is little calculated, as repeated experience has shown, assist the calmative and soporific influence of the sleepi potion exhibited. The remark of one patient will illustr a common experience: "You were all right, doctor; it w the chloral that was wrong, or rather my knowledge t you gave me chloral. It made me sleepy, but I foug against it half the night for fear if I once got asleep I sho never wake up!"

And, until sulphonal came, what other hypnotic had we but chloral? We used, twenty years ago, to call opium soporific, but it is quite as likely (indeed, it is more likely) to exert an excitant influence upon the brain and keep the patient awake but happy, while it puts him in worse trim than before for the work of the next day. The inorganic bromide, of whatever base, is a feeble and rarely acting hypnotic, not an agent for general use and trust in this realm. Urethan might, practically, be defined as a feeble and nearly tasteless chloral, and of occasional activity in the infant subject. Paraldehyde has greater bulk in dose, greater offensiveness in taste, than chloral, while its therapeutic power is less pronounced and for less time maintained. So far as we may trust the often-repeated assertion that it does not depress the heart, it has one valid claim to our suffrages. But the patient who takes his chloral without complaint too often "draws the line" at paraldehyde. To its offensive taste must be added the after-taste and the after-breath on the following morning, and which, in character and source, are allied to phenomena presented by the subject of too generous alcoholic potations. Finally, the dangers which attend an attempt to make the various alcoholics serve the role of soporific are too obvious for specification; while, none the less, from a therapeutic point of view, an alcoholic more justly belongs to the class of soporifics than does opium.

Therefore prompt welcome was given to sulphonal as to an agent which promised to afford relief in an exigency of much stress, many issues, and attended with much perplexity; and which, on further acquaintance, gave assurance that the welcome extended was not misapplied and still promised more and more. Thus far the percentage of failure in my application of the new drug has been very small—exact figures are not at hand. In such small per cent., I later came to see, at times, that the fault was my own—*i. e.*, there was faulty administration—or, again, in a few instances, failure resulted from individual idiosyncracy. If my success has been more frequent, my failure less frequent, than that of many others who have published clinical reports; if my conclusions respecting the value of sulphonal should appear optimistic, as tried by the consensus of opinions expressed in various medical journals for the last eight to ten months, permit a suspension of judgment until I may present with emphasis what I hold to be essential conditions of success in the exhibition of this new and unfamiliar drug.

Such conditions may be rated as three in number. T
first governs the time when the remedy should be admin
tered; the second concerns the method of administratio
the third determines the dose.

1. *The Time.*—It is a fact, perhaps wholly unprecedent
in what we observe of other neurotic materials, that s
phonal demands from one to two hours, or, rather, better,
demands from two hours to one hour, for its physiologi
incubation; often quite two hours elapse between ingesti
and the first accession of sensible medicinal energy. W
the untried subject it is wise to stipulate for two hou
Again, as a minor consideration, although the drug do
not disturb, and is not disturbed by, the processes of gast
digestion, it is well, on general principles, not to introdu
it into the stomach when this organ is in a state of repleti
and at the very height of functional activity. Both the
points can be easily provided for. The patient who reti
exceptionally early can place one hour at least between t
close of his evening meal and the ingestion of his hypnot
while nearly or quite two hours will remain before he go
to bed. But it is the latter point on which we insist—t
favorable influence of the remedy may wholly rest upon t
condition—that the patient does not get into bed, wi
expectation of sleep, until the sulphonal has begun
declare its action. Again and again, in my own early exp
rience, it was made evident that the person who thus erre
through misdirection or inattention, would have been mu
better off if he had had no sulphonal whatever. This cri
cal fact has not been properly set before the professio
Many who have published clinical reports upon the ne
hypnotic seem hardly to have apprehended it. It deserv
the brief space devoted to its discussion.

The drug is confessedly directed for relief of insomn
The patient, uninformed, looks for prompt action. Wa
ing for this, with no sign of its approach, he soon ge
weary, then grows excited, perhaps skeptical. Much, pr
sumably, was promised, but sleep still eludes him. On
quarter hour after another passes, and still no calm, no ind
cation of sleep. In how many instances during the last wi
ter might not such record, in effect, be applied to him wh
took his sulphonal as one should take chloral, either aft
getting into bed or immediately before! The brain render
excitable through past experiences with insomnia, the su
ject made incredulous, quite likely—and this is a comm

complication—through past failure of other resources, finds fresh provocation in this new miscarriage, and disappointment and vexation aggravate excitement, so that by the time the firm but gentle sulphonal influence is—or should have been—developed, the patient is in no condition to recognize or yield to it. Sleep comes at last, for the sulphonal will demand its own, but quite probably not until after midnight. The impression, once declared, gains new momentum every hour. Its acme is reached in the morning hours, when approaches the time for rising. The drug was taken for sleeplessness, not for sickness. Business engagements press, sleep is shaken off, from which it is positive pain to be aroused, the victim continues dazed, lethargic, sleepy, through half the day, and sums up his experience with the conclusion that the new soporific is the most "pestilent" drug he had ever encountered. And yet, with the rare exceptions to be presented later, the kindly hypnotic was in nowise at fault; the doctor was responsible both for failure and for subsequent suffering.

It is true that now and then the soporific impulse is realized much sooner than was calculated. A lawyer, under observation, has assured me that repeatedly a ten grain powder brought drowsiness in fifteen to twenty minutes; this is the briefest period ever reported to me. Such exceptional subjects can be instructed in terms proper to their idiosyncrasy. Yet if this peculiarity be not at once noted little discomfort results, for the sulphonal soporific influence grows in power as the hours advance, and its early impression has little of the overwhelming force which characterizes the first assault of either opium or chloral.

The second condition is relative of light weight. Viewed out of present connection it has high importance. Experience establishes the position that sulphonal is best dispensed in finely-divided powder—*i. e.*, the crystals, as sold in the shops, should be rubbed up in the mortar before the prescription is used by the patient. The recipe should always call for pulverized sulphonal. More than once has a patient been choked by the sharp-edged, semi-amorphous, semi-crystalline plates which the chemist sends forth from his laboratory, and even vomiting has followed from a strictly mechanical irritation. But, of all pharmaceutical modifications, the lozenge or tablet, whether of fifteen, ten, or five grains weight, should be avoided. Practically tasteless though it be, such mass requires considerable grinding

between the teeth; the harsh, gritty feel is unpleasant; it
quickly swallowed after division into a few fragments; ar
sulphonal thus presented to the stomach is not likely t
obtain ready and complete entrance into the circulatio
How it ever enters the circulation under most favorable co
ditions is problematical, being, as it is, soluble by only or
per cent. in water, having the power to resist both alkali
and concentrated acids; but that sulphonal in solid ma
exerts uncertain and diminished energy can not be open t
doubt. More than once I have known a tablet of fiftee
grains show less power than five to seven grains in fine pow
der. Sulphonal is far too costly to warrant such waste a
this.

How shall sulphonal powder be administered to the pa
tient? The latter is greatly liable to go wrong in this matte
unless instructed, and the physician is far too liable to witl
hold information. The cachet or wafer serves well for
dose somewhat below ten grains; the usual dose (ten t
twenty grains) is best taken from the bowl of a spoon int
the mouth, or allowed to roll upon the tongue from a scro
of sized paper; a free draught of water to be taken at onc
thereafter. If the spoon be dipped in water before it receive
the sulphonal, the latter will be more readily transferred t
the mouth. To order or permit suspension in water is t
occasion uncertainty as to what part the patient really r
ceived, and how much was left clinging to the sides of cu
or glass. A glass that has been rinsed several times, wit
view to insure ingestion of the whole dose directed, may ye
show somewhat of the powder clinging to its internal surface
This was first brought to my notice by a personal attempt t
suspend a powder in a wineglass of hot milk, with purpos
to obtain more prompt soporific impression. So much diff
culty attended the scheme, such liability to loss and waste
that the nurses are very few to whom I trust the giving o
sulphonal by this method. Finally, in the rare cases, whe
we wish to avoid stomach ingestion, there is reason to believe
from various observations lately published, that sulphonal i
equally effective, both as to size of dose and time of action
when introduced *per rectum*.

But the third specification—determination of dosage—i
the prime condition on which rests the successful use of su
phonal; and, for the present, we are concerned only wit
application of the remedy for relief of insomnia in the adul
period of life. First of all, and beyond question, the meas

ures of dosage which accompanied the introduction of this hypnotic, chiefly endorsed by foreign authority, were much too large. This did not imply danger in the least; *i. e.*, the dose ranging from two to four grammes; and it is not impossible that those who enjoyed the rich monopoly, accruing from the safe and successful introduction of the new drug, thought still to increase their gains by directing a dosage doubly and trebly above what we have since learned to be best applicable. It was not long before we came to know that posology should be expressed in grains and not in grammes. Often ten grains is shown to be all-sufficient; quite as often fifteen grains proves to be too much in action. Again, continuous use emphasizes an analogy with what was long since demonstrated in our experience with chloral —*i. e.*, the patient who takes sulphonal, night after night, may, quite likely, require his largest doses at first. He begins, *e. g.*, with fifteen grains, and after several repetitions, finds twelve grains, or even ten grains, all that is needed to give sleep through the night; later, if he still continue in the use of the hypnotic, seven, or even five, grains is found to work quite as well. In a few instances, indeed, I have known a patient, for several successive weeks, sleep nightly upon eight to ten grains, with no indication, during the entire period, for increment of dose or of diminution of hypnotic energy. My own early employment of grammes, as now recalled, has its frequent element of the ludicrous; although, nine or ten months ago, it had its corresponding feature of annoyance for the patient and perplexity of myself. A woman, in particular, thus victimized, a sufferer from a three gram. dose, does not intend that the doctor should ever forget her case; she was "demented twenty-four hours after, and stupid and somnolent for a full week!"

Chiefly to such misapplication, such abuse, of the new remedy, associated with non-recognition of the fault by the prescriber or misapprehension concerning the cause of certain sequential phenomena, is to be traced the source of much of the unfavorable conclusions or adverse criticisms which have appeared in the journals respecting the influence and the value of sulphonal. It may well be that the patient who takes 40 grains hardly sleeps more soundly through the night—at least the earlier part of the night—than he who takes but 10 grains; but the experience of the former is not at an end when has come the hour for rising; his punishment is sure to follow. Quite surely his sleep has gained new momentum with every hour after midnight; and a times, no ordinary means, at the usual hour for getting up will serve to awaken him and put him in condition to leav his bed. To such a subject might apply in full force th words addressed by the wise man to the sluggard. An worse yet is the state which sets in when forceful measure have for the moment antagonized this stupor; in this i chiefly evident the sulphonal punishment, and this chiefl presents the penalty of over-dosage. The somnolency, th yearning for resumed sleep, the inaptitude for all exertion mental or otherwise, are so emphatic, so imperious, s raised beyond and above all means of control or mitigation as, repeatedly to the sufferer, to suggest an idea of physic pain; and such intolerable experience may well hold, wit no sign or let up, for fully half the day. Judging from m own practice and the mishaps in the practice of many others in the earlier period before exaggerated dosage was abar doned, I have often wondered that reaction did not set ir from the cause just indicated, of stress sufficient to imper the general and further acceptance of the new and valuabl soporific on the part of the profession. I know of n sequential influence, from a slightly toxic impression, exerte by any other narcotic or neurotic agent, which has feature in common with what are prominently characteristic of suc misuse of sulphonal; so pronounced, so distressing, an yet so free from all danger.

But this concerns what is confessedly unequivocal toxi action, or approach to it. The value and use of the nev hypnotic should not be affected, in the slightest particular by considerations based upon what the drug may do whe it is grossly misapplied. Where the exhibition of th remedy has been intelligent and the dose rightly propoi tioned, the patient may be expected to awaken, after a slee normal both in quality and duration, with much of the vigo and elasticity which, in the healthy subject, marks th renewal wrought by natural sleep. In its right administra tion and in its best—I may even add, in its average—opera tion, thus conditioned, the man who owes his sleep t sulphonal, in such sleep absolutely sleeps off all dru impression, and the nervous system will no more preser sequential trace of this influence than will the alimentar canal.

Thus far the predominant experience has been had i view; allusion has been made to usual, to average result

Sulphonal at times disappoints,—what effective drug does not?—and, in the occasional subject, after repeated trial and renewed effort at adapation, either proves of little value or declares a pernicious influence. All active remedies, and especially neurotic remedies, are liable to change or pervision of operation through the impression brought to bear by the universally recognized physiological modifiers,—age, idiosyncrasy, etc.

First, as to age, and briefly, because the report must be largely negative. As before said, it has been chiefly in the adult period of life that sulphonal has been directed; and such limitation of experience has been general throughout the profession during the past year, judging by the reports and monographs thus far published. Indeed, no postive fact could well equal this negative indication, for the proof it affords that we have at last in our hands a purely and strictly hypnotic material, such material being calculated to meet the demand presented by insomnia, and insomnia being a condition of adult life.

As to infancy, I should hardly know how to tabulate dosage to meet the modification herein presented. *A priori*, sulphonal offers the advantages, which no infantile soporific ever offered before, of tastelessness and inocuousness; and recently I have more than once prescribed the powder to the subject of four months and upward in doses of two grains and upward with permission to repeat *pro re nata*. But, unfortunately, the infant, that does not and can not sleep, is too often keep awake by gastro-intestinal trouble—*i. e.*, by some derangement of stomach digestion or by faulty secretion—and resulting pain spasm, in the intestine, below the stomach. The action of sulphonal upon the entire alimentary canal is absolutely *nil*; surely, it has not virtue in the *role* of eupeptic, anodyne or anti-spasmodic. This disturbed or absent sleep of infancy must more often find its remedy in pepsin or in some opiaceous preparation rather than in sulphonal.

Nor are we prepared to state how far the condition of senility may either justify or modify exhibition of sulphonal. The bromides often fail of their purpose, as given to the aged subject, and there are physiological grounds for their failure. Chloral, otherwise safe, may suggest danger, as thus applied. Sulphonal, in corresponding use, may or may not have less energy, but that it is less safe in the senile than in the adult patient we can not for a moment believe.

Of the second source of disturbance—idiosyncrasy—w
have more to say; and, still, what remarks here apply mu
be put in a few words. Whenever sulphonal is found to b
unadapted and inadaptable to an individual, whose conditi
indicated its use, and therefore some other hypnotic mu
be substituted, the idiosyncrasic disability may be referr
to either one of two types. First, the patient does not an
can not yield to its ordinary physiological influence,—h
sleeps little better than he does without the drug; or, aga
(second type), whatever experience he may have ha
through the night, as respects sleep, and however modera
the dose, he suffers for a considerable part of the next da
with somnolency, heaviness, and perhaps dizziness; in
word, toxic action follows medicinal dosage. I ha
observed so small a quantity as 5 to 8 grains produce th
effect in a few individuals. If the subject who presents th
first type be pressed with larger dose, it is not at all certa
that his sleep will be improved either in quality or duratio
but he is almost sure to suffer from the phenomena ju
noted, hours after all trace of physiological impressi
should have disappeared. Fortunately, this twofold co
stitutional perversity, *quoad* sulphonal, is not often encou
tered in either form; but of its existence I have had unm
takable evidence more than once. When it does obtrud
as in all else respecting idiosyncrasy, in the impression
whatever drug, the patient *a priori* seemed to be as favorab
a subject for a trial of the new hypnotic as had the ten
more preceding persons who had taken sulphonal and show
only its best effects.

Mental states, cerebral conditions, both as respects bra
function itself and modified blood circulation through t
brain, are recognized as exerting various influences upon t
physiological action of chloral and the bromides. How su
conditions may modify the operation of sulphonal (wheth
e. g., *cet. par.*, its action is more readily procured, mo
kindly, is longer maintained in the anæmic than in t
hyperæmic brain, or *vice versa*), we have no data on whi
to advance an opinion. But one fact, if it be a fact, as w
are well assured it is, having close relation to this depa
ment of the subject, is of value and significance.

It was surely an astute observer who, among the earli
writers on the new drug, placed it on record that sulphon
is particularly applicable to the insomnia which originat
in, is characterized or aggravated by, "worrying and anxio

thoughts." This has proved emphatically true in repeated cases of my own. Such mental state will often convert opium into an excitant with the patient who, in calm mental status, has previously been shown to be susceptible of calmative action on the part of this agent, and even on occasion like miscarriage in the operation of chloral. But the man who carries "his business to bed with him," in a season when business is bad, margins small, or when wreck is feared, the insomnia which has its source in grief of bereavement, at times, would even seem to invite the sleep-compelling power of sulphonal. As thus far observed, one of the most gratifying, one of the most beneficient, offices of the new soporific corresponds to this peculiarity of action.

Finally, shall we refer to the class of physiological modifiers, shall we ascribe, preferably, to idiosyncrasy, the rarely observed phenomena, lately noticed in the journals, where perplexing or alarming sequelæ appear to have been developed after the ingestion of a moderate dose? Shall we refer the cyanosis of one clinical reporter, developed the following day in a patient who slept upon 30 grains, to this remedy and such dosage? or the eruption of another record, following moderate exhibition, which covered the entire cutaneous surface and resembled measles? I myself certainly have had no experience at all answering to such observations, and I am incredulous as to their correctness, as involving any responsibility of sulphonal. Not many years after the introduction of chloral, Liebreich wrote a memorable paper, in which he attributed a very large per cent. of the mishaps, which had attended its use hitherto, to grossly impure specimens of the drug, which had been made to flood the market, adding, that the American drug market had sinned and suffered above all others in this respect. If the close monopoly, which has thus far controlled the sale of sulphonal, and maintained its cost above all considerations of justice and reason, shall protect us against the adulteration which, in the early history of chloral, beyond question, distributed danger and death far and wide, and wrought early prejudice against an invaluable drug, perhaps we can well afford to pay so high a tax; but there are already indications that the physician can not always depend upon the purity of the sulphonal prescribed to his patient. In a word, all doctors are not good observers. All druggists do not dispense pure drugs. Responsibility for the faults of recent allusion must, pretty surely, be placed elsewhere than upon a correct and skilled exhibition, and corresponding operation, of our newly-acquired hypnotic!

Once more, and briefly. How certain morbid modifiers may influence the action of sulphonal, as otherwise observed, is a question of great practical interest; but unfortunately, such answer as can at present be given must be largely negative. How does pyrexia, heated blood, the throbbing arterial vessels which carry such blood to the brain, affect sulphonal in its function of procuring sleep? We are not prepared to say; but the clinical note which follows has significance and all the value which can accrue from a single observation.

Is sulphonal safe, or is its action cumulative, and so toxic, after a few repetitions of dose, in renal disease, where kidney function is much impaired or practically suspended? Upon this problem our brief record bears. Again, a large majority of medical materials are eliminated by the kidneys, chiefly or altogether. Do we yet know through what organ, by what avenue, sulphonal leaves the system?

A man of age past 50, dying with the slow, torturing death which attends progressive pulmonary œdema, in the last stage of waxy kidneys, and apparently dying from such condition alone; deprived even of the doubtful comfort derived from that animal opiate which kidneys that have nearly lost their function sometimes permit to accumulate in the blood; cyanotic, orthopnœic, with hippocratic face unable to sleep, nor daring to sleep if he might. Here sulphonal, given in eight to ten grain doses, at two to three hours' intervals, proved a boon indeed, and was not long in setting up a state which steadily developed into a veritable euthanasia. A degree of soothing and calmative influence was apparent after the second dose, and frequent bu brief periods of sleep soon followed, which had been absolutely absent for forty-eight hours before. In a word, th new drug seemed to be the only drug which could hav been availed of. Both opium and chloral were clearly contraindicated, and the bromides would have been little els than an aggravation.

In conclusion, gentlemen, I believe sulphonal to be th hypnotic in eight or nine out of ten cases requiring hypnoti resources, as presented to the physician. And here speak, as I have spoken from the first, from the standpoin of the general practitioner. Perhaps it has not the energ of chloral in cases offering violent resistance, as, notably, i the maniacal subject, although even here it may be presumed that repeated dosage and accumulated influence may sometimes control where chloral, within limits of safe exhibition, has proved inadequate. But this apart, the application of our new remedy is practically confined to such as will yield to its power in quantity varying from ten to twenty grains. A large majority of subjects of insomnia, as before said, will find in this measure the relief that is sought.

Already has sulphonal, as remarked in the early part of our paper, established its claims of first rank in the class of materials prescribed for procurement of sleep; and yet only one year ago its name had hardly been heard among the profession. But, on the other hand, it must be confessed that it is the infrequent practitioner, even at present date, who has formed such acquaintance with the new drug as to be able to give an independent opinion upon its merits; while, correspondingly, innumerable patients have been denied the aid and comfort only to be derived from this source. Two adverse conditions have served to delay its prompt and general acceptance by the profession,—first, its exaggerated and reprehensible cost; second, a not unnatural hesitancy with physicians to accept a new remedy because of past promises, in repeated instances respecting other materials, which were never kept. But, however often he may have been disappointed or deceived in the past, the progressive physician can no longer safely hold a skeptical attitude toward the development of therapeutic resources, in consideration of the fact that the period is much briefer than a decade which has produced antipyrin, acetanilide, sulphonal, and many other additions to our pharmacopœia of like value; while we are surely in position to insist that the materia medica teaching of twenty years ago, and which then had the mark of immemorial antiquity, has lately received, in an important particular, modification and extension, our remedial agencies no longer being drawn from "three kingdoms of nature," but from four,—viz., the mineral, vegetable, animal and chemical kingdoms.

SUPPLEMENTARY NOTE.—The disparaging remark made respecting the hypnotic virtue of opium seems to demand slight qualification, and also suggests one or more practical observations of close relation. We have long been used to teach and receive that opium has two general uses,—innumerable as its special uses may be,—corresponding to

its application for relief of pain and for procurement
sleep. But the fact seems to be that while this materia
wisely directed as anodyne, is more constant in its ben
ficient action than is that of almost any other drug, f
whatever purpose employed, negation, vexation, aggrav
tion commonly attend its service as a hypnotic. None t
less, there are rare cases, but unmistakable and otherwi
uncontrollable as they are rare, in which opium proves to
the only effective soporific which the physician has at han
whether it be used alone or as the agent of power in co
bination. In this connection is recalled a case seen duri
lecture term last year, and which is illustrative, although
was not observed with purpose of study. A rather stalwa
medical student, down with typhoid fever, and sleeple
night after night. Chloral alone, and in a combination wi
sodic bromide, in repeated and raised doses, seemed hard
to touch the patient; but a moderate dose of Dove
powder brought sleep on first trial.

But the case which follows, and which shall be cited
terms as brief as possible, drawn from my clinical experien
of the past month, seems to claim the space given to it
illuminating not alone the question at issue but oth
phenomena of hypnotic medication. A man, æt. 50,
weight above 200 pounds, and of size and muscular develo
ment such as to render his weight only normal. Lon
engaged in arduous and prosperous business; of habits
strict that he did not even smoke. No weak point
heredity, no organic disease or disorder. Had long suffere
from insomnia; could not remember for many months pa
when had eight hours' sleep of a night. Had previous
consulted various physicians, and had evidently made rap
transit from one adviser to another; had taken counsel of t
homœopath, who measured out for him sulphonal in 3
grain doses; and had resorted to regular physicians, wh
had not given him the advantage of a trial of chloral. T
latter fact was made evident soon after the case came in
my hands.

The first night I ordered two powders of pulverized su
phonal, of fifteen grains each, with one and a half hour
interval between doses; these to be followed later by twent
grains of chloral, if chloral should be required. Report ne
morning: took all that was prescribed, slept eight hour
"am half well already!" Here I made the mental no
that sulphonal is quite likely not to be trusted to in co

ditions presenting great resistance and demanding positive therapeutic energy of action; for evidently it was the chloral that gave sleep. The second night prescribed freely of chloral alone, and failed miserably of my purpose. The third night resolved to mass doses—still using chloral alone—making them larger and fewer in number. The nurse was instructed to give fifty grains (!) at bedtime; if patient awakened at any time short of eight hours, to give thirty grains more, and later, under same condition, twenty grains. Left the patient with slight misgiving; but the case was one calling for heroic medication, and there are times when the physician must assume to be the "master of nature." Report of next morning: patient had taken his hundred grains of chloral in the space of about four hours, and had had about five hours of broken sleep. Here I made a second mental note, in effect that certain cases presenting great resistance, and demanding strong therapeutic energy, may show chloral to be about as ineffective as sulphonal.

The next night a preliminary thirty grain powder of sulphonal was given, and two hours later, as the patient got into bed, was administered per rectum a suppository containing half a grain of morphine and one-third of a grain of extract of belladonna; and at this point, and by such method, the problem was solved. Here was made a third mental note, of character to suggest and justify the present supplementary discussion—to-wit, that in rarely encountered cases, our most valued hypnotics, and those of daily trust, altogether fail us, and opium alone proves the agent of power in procuring sleep.

None the less, there is already somewhat of evidence for belief that a preliminary exhibition of sulphonal—as after the analogy of such use and service of a bromide, but more emphatically—is efficacious in rendering opium soporific, which, otherwise, might have proved excitant and agryptic.

A final observation in respect of recourse to opium as a hypnotic; and I desire to present it with especial emphasis, for it concerns a practical point which has been too seldom taught and which is too unfamiliar with the profession. Its uncertainty of action is not its only fault, is not its gravest misdemeanor—*i. e.*, as respects the exertion of a soporific or of an excitant influence. The drug is dangerous from a therapeutic, as it is often disappointing from a physiological standpoint. The insomnia which finds its relief in opium rapidly demands increase of dosage; and when an attempt is made to shake off such dependence, though the period resort to opiates may have been the briefest, there almo surely returns in exaggerated form the original disability the insomnia is more unruly and exasperating than befo the opium was used. It is thus from a special and an add tional condition that the man who gets his sleep throug this drug is in peril above him who employs it for relief pain.

Contrast such record with that of the successful applic tion of chloral and sulphonal. In extreme conditions I hav known a patient to depend upon the former for month together (even for six months), and the latter for sever successive weeks, for his nightly sleep; and, aside from nee of increased dosage, quite often the original quantity w progressively diminished. And thus far, not only, b when the right time has come, when is declared the cond tion which gives evidence that brain and nerve have bee sufficiently restored through normal sleep, secured witho intermission night after night, the nightly sleeping potio has been dropped all at once, and the patient seeme hardly—or was not at all—conscious of its loss. This i equivalent to saying—that it is not too much to say—that true hypnotic, skillfully applied to a typical case of insom nia, is curative. It used to be held, in the earlier exp rience with chloral, that this agent could only serve as temporary and palliative measure, could only afford reli for the time, until the condition which caused the insomni should be otherwise, by other agencies, removed. But w have long since come to know that whatever the mean artificial though it be, which provides physiological sleep and which, by repeated use, substitutes a habit of nightl sleep for the habit of nightly sleeplessness, the same thereb and through such operation of itself cures insomnia.

In conclusion, we can not withhold the remark that ou small class of soporific remedies, lately so strongly recruite by the addition of that which has formed the subject of ou paper, has too often suffered, been misapprehended, bee harshly judged, not alone by the secular press and the pub lic, but by representatives of the profession. Their misa plication, by way of indulgence, and with result of more o less constant intoxication, is an evil of wide extent, an fraught with fearful consequences beyond question. But th prominent notice taken of the occasional chloral *habitue*, i whose behalf is sought the protection of an asylum, or wh ends his life by suicide, the public fulminations against the doctor who will use so deadly a drug, and the accompanying plaudits of the homœpathic doctor and his little pills, are urged by no kindly spirit and serve no good purpose. Let us look at the other side of the shield. How is it with the hundreds, nay, the thousands, throughout the land, who are every year saved by the timely and judicious use of hypnotics! Our captious critics disregard this aspect of the question; and who, thirty years ago, would have brought up in the insane asylum for the want of bromides, chloral, sulphonal, in the practice of a school of physicians which possessed no specifies for the relief and cure of insomnia, for the procurement of healthy sleep.—Henry M. Field, M.D., in *Therapeutic Gazette.*

Erysipelas, and Its Jugulation by the Use of Campho-Phenique.

BY F. H. MILLIKEN, M.D., PHILADELPHIA, PA.

On January 4 last I was called to see an infant some eighteen months old that had received an injury to one of its limbs by falling from the crib a few days previously. On examining my little patient, I found the right knee swollen, inflamed, and painful to the touch. The skin was intensely red, with that livid, shining appearance so characteristic of erysipelas. The red area was irregular in shape, sending out two finger-like offshoots. The patient was restless, with considerable fever, and pulse at one hundred and forty. I stated to the parents at once that erysipelas had set in, but they doubted my diagnosis, and concluded to call in another physician—one of a different "school." This party, as I afterward learned, treated the inflammation as one of a simple nature, due to the mechanical effects of the injury.

Two days later I was recalled to the case. During this period the erysipelas had made considerable progress, and now involved the limb half-way to the ankle. I prescribed a weak lotion of lead-water and laudanum, and gave quinine and iron internally, but the disease made constant progress until it involved the entire leg and foot below. For three days it remained stationary, but at the expiration of this time it commenced to spread upward, and involved the lower third of the thigh. An effort was made to check progress by painting a ring of tincture of iodine around t limb. This failing, a strong solution of nitrate of silver v tried, with no better success.

Remembering the fact that erysipelas does not advai beyond a natural crease in the skin, a cord was pas around the limb at a point where the fat made a decic crease-like depression in the integument, and was dra sufficiently tight to produce an artificial crease. The infla mation continued to advance until it reached the line tl drawn. At the edge of the true crease it stopped, bu passed directly under the cord elsewhere, exactly as thou it had not been there.[1]

Upon consultation with another physician, who had be called in, we decided to paint a ring of iodine parallel w Poupart's ligament, but it was followed by no better resu than previous efforts in this direction. The disease v stopped in its onward march by the femoral crease, wher remained stationary for two days, and again commenced advance, creeping to the outer aspect of the thigh, attack the skin of the abdomen at the anterior superior spin process of the ilium, and extending until it covered a sp as large as the palm of the hand, and had thrown out finger-like advance guards much farther.

At this point I concluded to try campho-phenique, antiseptic remedy, with which I had been "sampled" so time previously, and which until then I had not thought and which, perhaps, would not have occurred to me if I h not really been at the "end of my tether." At any rate concluded to use it, and in doing so, followed the suggest given in the literature sent with it, and mixed it with ol oil. Thus:

℞ Campho-phenique, 2 parts;
Olei olivarum, 1 part. M.
Fiat mistura.

This was applied with a camel's-hair pencil every th (3) hours.

The result was marvelous.

At the end of the first day the bright scarlet flush h paled; at the end of the second there was but a trace of t inflammation, and even this had disappeared before the e of the third day had come to a close.

When the good effects of the first day's application of t campho-phenique (which was made over the abdomen alone) became apparent, the thigh and leg were also covered with the remedy.

The limb was carefully washed and dried, and campho-phenique three parts, olive oil one part, was applied to the thigh, and campho-phenique *pure* to the leg and foot. The skin below the knee had by this time lost its redness, and had a mottled blue appearance. It had been bathed with soap liniment in the meantime, with a view to a restoration of healthy functions. During the progress of the disease upward, an abscess had formed in the cellular tissue immediately below the head of the tibia. This was opened, and had been washed out with a bichloride solution (one to four thousand), and dressed with antiseptic gauze and cotton. The same course was pursued with other abscesses (about a dozen in number) that had formed in the course of the disease. The progress in all of them had been very unsatisfactory, and, consequently, when we decided to use campho-phenique on the surface, we concluded to try it in the abscesses as well. They were accordingly washed out, and injected with campho-phenique and olive oil (one part of the former to five parts of the latter), and dressed with absorbent cotton, saturated with the same mixture and wrung out.

There was no further trouble, and the little patient made a rapid recovery. With the check of the onward march and disappearance of the eruption, there was a sudden and complete subsidence of alarming symptoms.

In two subsequent cases of erysipelas resort was at once had to campho-phenique, and the result was an immediate and complete jugulation of the disease, the first case lasting three days and the second five.

I think, therefore, that I am justified in my conviction that in campho-phenique we have a powerful and apparently sure remedy for erysipelas, and I feel that I am but performing a duty which every physician owes his profession, in making known my experience with the remedy in question.

Gleanings.

Effect of Sleep on the Gastric Juice.—Some inv gations which have recently been carried out in Profe Manassein's wards in St. Petersburg, by Dr. S. L. Ra port, on the effects of sleep on the secretion of the ga juice, are published in the last few numbers of the *Vrach*, tend to show that the digestive functions of the gastric j are materially affected by sleep. The experiments made on the human subject, the gastric juice being drawn by means of a flexible india rubber œsophagus so the introduction of which is said not to have caused an convenience to the subjects of the research. The qua of the gastric juice secreted during sleep was shown t very much less than that secreted during waking hours; chloride of sodium, as well as the hydrochloric acid, diminished; but the secretion of pepsin did not seem t much affected. By means of experiments conducted in laboratory, it was found that the digestive power of ga juice secreted during sleep was lower than that sec during waking hours, the difference apparently depen mainly upon the lack of hydrochloric acid. With regar the rennet ferment, Dr. Rappoport was unable to de strate any alteration in its secretion during sleep.—*Lo Lancet.*

Quinine in Cholera Morbus.—Dr. W. Moreh Galliger reports, in *Ther. Gaz.*, that he has found quinine has an almost specific effect in the cholera morb adults. He says that he once gave it to a case of the l in three grain doses, because she could retain no morp on her stomach, and for the want of anything else to at the time. To his surprise she retained the quinine began to improve. Since then he has used quinine i similar cases and has never known it to fail.

Powder for Ozœna.—Cozzolino (*Jour de Med.*) g the following:

℞.—Salol	5 grams.
Boracic acid	2 "
Salicylic acid	0.50 centigrs.
Thymol	0.20
Powdered talc	10 grams.—M

S.—Snuff frequently.

INFERTILITY IN THE MALE.—Infertility in males may be due either to azoospermia (absence of spermatozoa) or aspermia (absence of emission). The product of emission consists, as is well known, of a mixture of three secretions, from the testicles, the seminal vesicles, and the prostatic glands. Dr. Fuerbringer has remarked that the testicles only produce motionless spermatozoa, which become animated on admixture with the prostatic secretion, the the importance of which as a factor in sexual impotence has been generally overlooked. According to some recent observations the prostatic glands secrete a milky but non-viscid liquid, holding in emulsion a number of globular bodies, half the size of red blood corpuscles, and composed of lecithin. It is this secretion that gives the characteristic odor to the seminal emission, the other constituents being devoid of smell. The stimulating effect of the prostatic secretion is only exercised on viable spermatozoa, and it has no influence on those which for one reason or another are "dead." In several cases of young men whose semen contained these motionless spermatozoa, the latter became active enough on the addition of some prostatic secretion, the defect being thus evidently due to a want of it. Azoospermia proper is very rare, and when present is due either to atrophy of the secreting organs or occlusion of the vas deferens consequent on double epididymitis or gonorrheal funiculitis. This affection no treatment can relieve, but aspermia, depending as it often does on stricture of urethra, may be cured by removal of the stricture.—*Medical Press.*

THE VALUE OF ANTISEPTIC PRECAUTIONS IN INTERNAL URETHROTOMY.—The dangers of the operation itself are, the author, Dr. B. Clarke, maintained, dependent on septic fever; and it depended either on self-infection from a septic urethra or on dirty instruments. The latter source of infection could be easily guarded against by the thorough cleansing of instruments and catheters, whilst the purification of the urethra was no easy matter. To effect this, however, as far as possible, the urethra should be irrigated with sublimate 1 in 2,000 for several days beforehand, and when the stricture has been divided, the bladder should be washed out with a similar solution, and then with hot water at a temperature of 105° F. After this a catheter should be tied in for twenty-four hours. By this means the urine came very little in contact with the urethra, and septic infection was avoided. Fifteen cases were related in which the plan had been tried by the author, and he allud some others in which he had suggested the plan to surgeons. The results were very successful.—*B Medical Journal.*

THE CHOICE OF A HYPNOTIC IN INSOMNIA.—Chlora fallen into disfavor of late years, and deservedly. weakens the heart's action, lowers the powers of self trol, and creates a craving for its continued use. depression and general disturbance of function produce opium contraindicate its use in a large majority of c The bromides are useful as a sedative, but loss of bodily w and blood impoverishment follow their frequent exhibi Sulfonal has been hailed as the hypnotic *par excellence*, certainly it has given satisfaction in most cases; but are instances where it is slow in its action or contrary i effects. These objections can be urged, however, ag every known remedy, and should not detract from the of this new sleep-producer. Dr. Clouston (*Am. Jour. o Med. Sciences*, April, 1889) throws the weight of authority in favor of the claims of paraldehyde as the hypnotic. It is so valuable, he says, so reliable, so from risks, that it can not be too widely known by the fession. It acts so quickly that the patient is often a in five minutes after getting the dose. After a paraldel sleep there is no headache, no lassitude, no loss of app no disagreeable feelings. It restores the sleep habit of brain in many cases. As to the dose of paraldehyde, b with forty minims or a drachm, and go up to two, thre even four drachms, if necessary. Give it mixed with ture of quillaya in cinnamon water. Its bad taste can be got over.

CONSANGUINEOUS MARRIAGES.—The author of a re work on this subject calls attention to the curious i which have been generally received in reference to infecundity of, and physical degradation consequent consanguineous marriages. So far as the data given be trusted—and it is hardly to be supposed that the au holds a brief on the opposite side—there is absolutely n ing to show that marriages between near kinsmen are ing in fertility, or that they are peculiarly liable to issue to deformed or diseased offspring. There is no of instances of enforced consanguinity, in the matter of riage, in isolated communities, according to M. Hut disprove the assumption that physical degeneration is likely to result from the practice. An investigation into a number of unions between uncles and nieces, nephews and aunts, and cousins in the first and second degree, give an average of children rather above than below the general average, though this is attributed to some extent to the comparatively early age at which such unions are generally contracted. Breeders inform us that the results are markedly in favor of consanguineous unions between healthy, well-bred animals. Unions between men, or animals, of widely different varieties, on the other hand, have a decidedly injurious effect on the offspring, and beyond a certain limit are almost absolutely sterile. Mulattoes and the half-breeds of India and America are striking examples of the deterioration to which such racial disparity gives rise. The great point to bear in mind is that the union of individuals with the same morbid tendencies intensifies the taint, and that, too, quite irrespective of any consanguinity. The moral, according to the author, is that the reasons which have led to the prohibition of marriages within certain degrees of relationship are social, and not physiological.—*Med. Press and Circular.*

DYSMENORRHŒA.—William Wiles, M. D., Snaresbrook, Essex, says: "I used Aletris Cordial especially in a case of severe dysmenorrhœa of considerable standing. The first period that occurred after taking the Cordial was passed through with considerably less pain than usual. The patient took the medicine for a week before the menstrual period was expected, for six months. At the end of that time no difficulty or pain was experienced. So that, considering the time the patient had been suffering before, the benefit was very marked."

TREATMENT FOR CATARRHAL AFFECTIONS OF THE THROAT.—Dr. G. B. Hope, 34 W. 51st Street, New York, Attending Surgeon Metropolitan Throat Hospital, and Professor Diseases of the Throat, University of Vermont, says: "For a long time I have been employing Horsford's Acid Phosphate as a constitutional treatment for catarrhal affections of the throat. I consider it to be among the very best tonic excitants of the vocal organs, and particularly applicable in relieving the fatigue and huskiness of voice incident to those who pursue a professional career of actor or vocalist, and far preferable to the various forms of wines now so generally recommended for this purpose. I seen no other allusion to its employment in this directi which I believe you are perfectly safe in recommending from a theoretical and practical point of view."

CHRYSAROBIN IN HÆMORRHOIDS.—Dr. Kossobu speaks of this drug in high terms, but he differs from U in the quantity. After washing the swelling with a per cent. solution of carbolic, or a one per cent. of cre he recommends the following ointment to be applied t or three times a day:

℞	Chrysarobin	0.8
	Iodoformi	0.3
	Ext. belladonna	0.6
	Vaselin	15.0

M.

Or a suppository may be made with cocoa butter. bleeding be present, tannin may be combined. Dr. K sobudskii affirms that pain, smarting and bleeding will appear in two or three days.—*Medical Press.*

PREVENTION OF SYPHILIS.—The Paris correspondent the *Medical Press and Circular* states that M. Fournier presented to the Academy of Medicine the report of committee appointed to inquire into the best means preventing the spread of syphilis. The following are principal articles: 1. The Academy calls the attentio the authorities to the development to which prostitution the streets has grown, and demands that energetic mean taken to press it. 2. The legion of wine shops only a clandestine prostitution, and should be suppressed. 2. strong and active surveillance should be exercised in neighborhood of the colleges, where temptation is rife. A girl proved to be contaminated should be sent t special sanitary hospital, from which she should not be charged without being furnished with a medical certific at the same time the rules of the hospital should hav nowise the stringent character of the present St. Laz 5. The registered women should be visited regularly on week and once a month by a medical inspector. 6. Inst of increasing the number of beds in certain hospital which venereal diseases are treated, new special hospi should be created outside the walls of Paris, to which dispensaries should be attached. 7. Every student of t years' standing should have free access to all these inst tions, and before presenting his thesis he must produce a certificate justifying a three months' stage in one of these services.—*Medical and Surgical Reporter.*

LAFAYETTE MIXTURE.—The Lafayette mixture as recommended by Bumstead (1870) is as follows: ℞. Copaibæ, f ℥ j; liq. potassæ, f ʒ ij; ext. glycyrrhizæ, ℥ ss; spir. æth. nitrosi, f ℥ j; syrupi acaciæ, f ℥ vj; olei gaultheriæ, gtt. xvj. Mix the copaiba and the liquor potassæ, and the extract of licorice and sweet spirit of nitre first separately, and then add the other ingredients. Dose.—A teaspoonful after each meal.

Dr. Keye's modification of this formula is as follows: ℞. Potassæ citratis, ʒ ij-vj; bals. copaibæ, f ʒ iij-vj; ext. hyoscyami fl., f ʒ ss-ij; syr. acaciæ, f ℥ iss; aq. menth. pip., q. s. ad., f ℥ iij. M. Sig.—Shake. Teaspoonful in water.

Book Notices

A GUIDE TO THE DISEASES OF CHILDREN. By James Frederic Goodhart, M.D., F. R. C. P., Physician to Guy's Hospital, and Lecturer on Pathology in its Medical School; Physician to the Evelina Hospital for Sick Children. Re-arranged, Revised and Edited by Louis Starr, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania; Physician to the Children's Hospital, Philadelphia, etc. Second American, from the Third English Edition, with Numerous Formulæ and Illustrations. 12mo. Pp. 772. Cloth. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price, $3.75.

The *American Journal of Medical Sciences* thus speaks of this work: "The author has avoided the not uncommon error of writing a book on general medicine and labeling it 'Diseases of Children,' but has steadily kept in view the diseases which seemed to be incidental to childhood, or such points in disease as appear to be so peculiar to or pronounced in children as to justify insistence upon them." We have made this quotation, coming as it does from a source which is considered of high authority, as evidence of the validity of the impression made upon us by an examination of the work—that it is more properly a treatise upon diseases of children than are the majority of the works which represent themselves to be such. As the writer in the

American Journal intimates, there are some books *labe* "Diseases of Children," which possess so few features being devoted to the affections of children, that, if it w not for the titles found on the title-pages, they wou almost be mistaken for works on general medicine.

An examination of Dr. Goodhart's work convinces c that he has made the diseases of children a subject of p found study. Throughout the volume each disease is treat with reference to the child that is afflicted, and not w reference to the disease alone. If the latter had been t case, the work would have differed but little from one general practice; for the products of disease in a child va but little from those in an adult. If the pathology of infla mation of the brain be studied, in considering that disea there will be found no difference in that of the child and t adult.

The method, therefore, which has been adopted in tre ing the affections of childhood in this volume resemb very much that of bedside instruction. The student c almost imagine the presence of a child before him in t consideration of each disease, so clearly are the pecul symptoms of a child suffering with the affection pointed o It is in semeiology and treatment that make it necess that disorders of children and adults should be conside apart. Pathology of morbid conditions may be set forth the diseases of the latter for the explanation of phenome but it is necessary only in part in those of the former.

We feel sure that as the work becomes more known this country and in England, the demand for it will greatly increased in consequence of its peculiar merits.

Saunders' Question-Compends, No. 7.—Essentials of M eria Medica, Therapeutics, and Prescription Writi Arranged in the Form of Questions and Answe Prepared Especially for Students of Medicine. Henry Morris, M.D., Late Demonstrator Jeffer Medical College; Co-Editor Biddle's Materia Medi Visiting Physician St. Joseph's Hospital, etc. 12n Pp. 250. Cloth. Philadelphia: W. B. Saunders, Walnut Street. Cincinnati: Alfred Warren. Pri $1.00.

In previous notices of volumes of the series, we h explained the scope of Saunders' Question-Compen showing that they are especially adapted for students attendance upon medical lectures. They assist such to put together the knowledge they have acquired in the lecture-room.

As the author states, the object of the work is not to replace with the student the larger text-books on Materia Medica, "but simply to give him, in condensed form, the principles of this branch of medicine, without a knowledge of which he can neither pass his final examinations, nor practice his profession intelligently" . . . . . but neither this nor any other compend will suffice to form the ground-work of what is really the study of a lifetime—the Science of Medicine.

Such a work as this is, can not help but be in great demand by medical students preparing for examinations—especially their final examinations.

We feel sure that if we had space to copy the answer to the question "What are the Medicinal Uses of Ergot?" not a few of our readers would be interested and instructed. We will, however, give a brief outline.

Ergot is used as an *oxytocic* in small doses in uterine inertia during the second stage of labor, when there is no resistance on the part of the bony canal or the soft parts of the mother. In large doses it renders the contractions tetanic and continuous, greatly increasing the danger to the mother and child.

In *post-partum* hemorrhage it is invaluable, but had better be withheld until the placenta has been delivered, as prior to this it will tend to imprison the placenta by contracting the cervix. After the uterus is empty it may be given in full doses by the mouth or hypodermically. To induce *premature labor* it is an uncertain remedy. It is worse than useless to arrest hemorrhage in cases of *threatened abortion*. It is efficient, however, after the abortion has occurred. In *abortions*, after the separation of the placenta from the side of the uterus, hemorrhage following, it imprisons the ovum—preventing its escape—by contracting the cervix.

As a *hemostatic*, it is used in all hemorrhages where surgical means of arrest can not be employed. In menorrhagia, epistaxis, hemorrhage from the gums, and in broncho-pulmonary, intestinal or renal hemorrhage it is very efficient. In hematemesis, it is not so serviceable. In purpura it acts beneficially. From its influence in contracting blood-vessels, it has been used in the early stages of pneumonia and other inflammatory affections, in spinal congestions, in cere-

bro-spinal meningitis, and for the cure of internal aneuris
It has been injected hypodermically near the seat of dise
for the cure of varices, hemorrhoids, and impotence du
dilatation of the dorsal vein of the penis. It is effici
used hypodermically, to reduce the size of an enlar
spleen. It is serviceable in glycosuria and polyuria. Fr
its action on unstriped muscular fibres, it is useful in rela
tion of the sphincters, diarrhea, dysentery, spermatorrh
uterine inertia.

ESSAY ON MEDICAL PNEUMATOLOGY: A Physiological, C
ical, and Therapeutic Investigation of the Gases.
**J. N. Demarquay, Surgeon to the Municipal Hospi
Paris, and of the Council of State; Member of the
perial Society of Surgery; Correspondent of the Ac
emies of Belgium, Turin, Munich, etc. Transla
with Notes, Additions and Omissions, by Samuel
Wallian, A.M., M.D., Member of the American M
cal Association; Ex-President of the Medical Asso
tion of Northern New York, etc. Illustrated with F
Wood Engravings. 8vo. Pp. 300. Cloth. Phila
phia: F. A. Davis.**

The use of oxygen as a therapeutic agent, says the tra
lator of this work, has been steadily increasing in this co
try for the past twenty years. No American practitio
however, he states, has devoted to it any approach tow
scientific and thorough investigation, and all our exp
menters, up to a very recent date, have used it chiefly fr
an empirical standpoint. Machines for generating oxy
have, from time to time, been advertised in medical j
nals for the use of physicians, but we do not believe t
have met with much sale, for the reason that no worl
scientific value has been published in this country f
which American physicians could obtain information
regard to the proper method of employing oxygen as a t
apeutic agent. It has been for a long time considered
oxygen and other gases have properties of value in
treatment of a number of diseases, but not knowing ho
use them, and not being aware of any sources of infor
tion in regard to their employment, medical men have b
deterred from seeking their aid, and have turned their at
tion to other therapeutic agents.

We have no doubt but that physicians of this cou
will feel under great obligations to Dr. Wallian, the tran

tor, for affording them the opportunity of studying this work of Demarquay on Medical Pneumatology. Like obligations will also be felt toward Mr. F. A. Davis, the publisher, for the part he has done.

The complete work of Demarquay consists of eight hundred and sixty-one octavo pages, and is divided into three principal parts. In the translation of Dr. Wallian only the most practical portions are given. But this abbreviation the translator thinks has rather enhanced the value of the work than diminished it, for nothing of vital importance to the general reader has been omitted. The complete volume would have been too bulky, and in some portions too much given to speculative discourse, for profitable reproduction.

A TREATISE ON MATERIA MEDICA, PHARMACOLOGY AND THERAPEUTICS. By John B. Shoemaker, A.M., M.D., Professor of Materia Medica, Pharmacology and Therapeutics in the Medico-Chirurgical College of Philadelphia, and Member of American Medical Association; and John Aulde, M.D., Demonstrator of Ciinical Medicine and of Physical Diagnosis in the Medico-Chirurgical College of Philadelphia, and Member of American Medical Association. In two volumes. Volume I.: Devoted to Pharmacy, General Pharmacology and Therapeutics, and Remedial Agents not Properly Classed with Drugs. 8vo. Pp. 353. Cloth. Philadelphia: F. A. Davis. Price, $2.50; sheep, $3.25.

This is a highly interesting work, and is certainly worthy of an attentive perusal. The authors state that the department of toxicology being in marked contrast with that of therapeutics, they hold that little is to be gained to practical therapeutics by the needless repetition of well-established operations, which require the exhibition of lethal doses of drugs whose physiological action is thoroughly understood. No true and reliable system of treatment can be based on such experiments, nor upon the experiments of physiologists on persons enjoying apparent health, although such observations are of some value in aiding the physician to determine the special direction manifested by a drug used as a toxic agent. In disease the entire nervous system, they assert, is so affected that the action of a drug thus studied can not be estimated; and, as a consequence, we are compelled to be guided in many instances by these observations and by experience rather than by physiological tests, but deductions are not to be based upc these alone, to the exclusion of facts brought out in tl course of investigation; chemistry, pathology and our know edge relating to micro-organisms must also be taken in account.

The theory of the authors undoubtedly is correct. Whi the effect of drugs administered to the lower animals ofte times affords valuable information; yet their actions, und those circumstances, are by no means conclusive, for tl conditions which exist in a healthy animal are by no mea the same as those found in a human being who is laborir under disease. There is a difference in the character of tl nervous systems in men and in brutes when the conditio of both are normal; and still greater is the difference wh the vital functions in the case of one are pathological affected, but in the other they are not. Opium in o individual produces sleep, but in another wakefulness ar even delirium follows its exhibition. What are the caus of these opposite effects of the same drug? We can on reply that they must be found in the different characters the nervous system of the two individuals.

The authors have divided this, the first volume, into tw parts. Part I. is devoted to the consideration of Mater Medica, Pharmacy, Pharmacology and Therapeutics. Pa II. treats of Remedies and Remedial Agents used in tl Treatment of Diseases not properly classed with Drug

The remedies to which attention is given in Part II. a electricity, oxygen, massage, baths, heat and cold, mine waters, etc. Nearly a hundred pages are devoted to ele tro-therapeutics, in which the value of electricity as a rem dial agent is very satisfactorily set forth.

The authors desire to be classed among those who stu what they see, reflect upon what has been recorded, a deduce from the knowledge thus acquired the inferenc warranted by the facts. In the preparation, therefore, this work this method has been adhered to, except in t case of theories which may have been advanced to accou for conditions that are, as yet, inexplicable under the mc rigid laboratory and scientific tests at present available.

Notwithstanding the many works on Materia Medi and Therapeutics which have been published, yet we co sider this one as a valuable addition to medical literatur It sets forth the views which are now held in regard to t action of medicines in the cure of diseases better than a other work now before the profession. Within a short period quite a number of new remedies have been brought to the attention of physicians and are largely used by them. Among these are antipyrin, antifebrin, sulphonal, cocaine, etc. Electricity has been rescued from charlatanism, and has taken its place among regular remedies. But probably the study of bacteriology has done more than anything else in revolutionizing the views of physicians as regards the cause of disease, and sooner or later will effect great changes in their treatment. Under the circumstances, in order to keep abreast of the times, the old works upon materia medica must be thrown aside, and new ones studied.

A MANUAL OF CHEMISTRY FOR THE USE OF MEDICAL STUDENTS. By Brandreth Symonds, A.M., M.D., Assistant Physician to Roosevelt Hospital, Out-Patient Department, etc. 8vo. Pp. 154. Cloth. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price, $2.00.

This little work, though designed for medical students, is not a medical chemistry. It takes up those parts of General Chemistry which are necessary for them to know. In the first three chapters the Non-Metallic Elements are considered—their history, occurrence, preparation, physical properties, chemical properties, function in nature, etc. In the twelve subsequent chapters are treated Water, Air, Chemical Nomenclature, Graphic Formulæ, Metals, Organic Chemistry, Tests, Urine, Chemical Theories, Metric Weights and Measures.

The work undoubtedly contains a considerable amount of useful information, but really we do not understand what need there is for it. The ordinary text-books upon chemistry contain all that is in it. No student would be satisfied with the very brief consideration of Urine which Chapter XI. sets forth.

FOODS FOR THE FAT.—A Treatise on Corpulency and a Dietary for its Cure. By Nathaniel Edward Davies, Member of the Royal College of Surgeons, England. American Edition. Edited by Charles W. Greene, M.A., M.D. 8vo. Pp. 138. Cloth. Philadelphia: J. B. Lippincott. Cincinnati: R. Clarke & Co. Price, $0.75.

The American editor of this work pronounces excessive fatness a disease, and says that it should be treated as a disease. But he does not state at what weight a man of average height begins to be *morbidly* fat. Some life insurance companies make it a rule to decline an application for insurance if the applicant's weight is over 125 pounds.

The work before us claims to show in plain and unscientific language a method of reducing excessive fat in a manner not at all painful or disagreeable to the individual. It is perfectly possible, it says, and not very difficult, to go on eating—and eating very well indeed—and yet be cured of excessive stoutness. "If the patient be at all well to do, he will be able, from these pages, to select for himself a dietary that he and his friends can enjoy together, if need be, while yet he is slowly and safely reducing his surplus fat."

We can not inform our readers what the pleasant method is, which, if pursued, will so diminish one's avoirdupois, so that if it is excessive it will be reduced to an average. To do it we would be under the necessity of copying the book. It will be better to purchase it.

A HAND-BOOK OF DERMATOLOGY, FOR THE USE OF STUDENTS. By A. H. Ohmann-Dumesnil, A.M., M.D., Professor of Dermatology, St. Louis College of Physicians and Surgeons; Consulting Dermatologist to the St. Louis City Hospital, etc. Illustrated. 16mo. Pp. 167. Cloth. St. Louis: St. Louis Medical and Surgical Journal Publishing Co.

This little work was not prepared, the author says, "to fill a long-felt want," but as a guide to students in their reading.

The author treats skin affections under nine heads. 1. Disorders of Secretion and Excretion. 2. Hyperemias. 3. Inflammations. 4. Hemorrhages. 5. Hypertrophies. 6. Atrophies. 7. New Growths. 8. Neuroses. 9. Parasites. Of course, in so small a work, none but general principles can receive attention; and descriptions of the various skin diseases must be limited largely to a statement of pathognomonic symptoms. Details have consequently been avoided as regards pathological minutiæ and facts with reference to differential diagnosis.

Students in attendance upon lectures will find the little volume very valuable for refreshing their memories when at their rooms. It contains about what an industrious and interested student would take down in his note-book whilst listening to a course of dermatological lectures.

A MANUAL OF OBSTETRICS. By A. F. A. King, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Columbian University, Washington, D. C., and in the University of Vermont; President of the Washington Obstetrical and Gynecological Society, etc. With One Hundred and Forty-one Illustrations. Fourth Edition. 12mo. Pp. 431. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, $2.50.

The chief purpose of this book, as stated by the author himself, is to present, in an easily intelligible form, such an outline of the rudiments and essentials of Obstetric Science as may constitute a good ground-work for the student at the beginning of his obstetric studies; and one by which it is hoped he will be better prepared to understand and assimilate the extensive knowledge and classical descriptions contained in larger and more elaborate text-books.

The author does not profess to have advanced the art and science of obstetrics by new discoveries which he desires to communicate to the profession through the medium of this work; for he admits that it is, in great part, a compilation from the more recent treatises of Leishman, Playfair and Lusk. The volume constitutes an outline of all the important facts of obstetrics, expressed in as few words as possible consistent with setting them forth fully and intelligibly. The result has been the preparation of a Manual especially adapted to the wants of students, and to the wants of physicians who desire to refresh their minds as regards the principles and practice of midwifery, and modernize, as it were, their knowledge by learning the facts which have been developed and accepted by the profession since the days of their studentship.

The "cramming method" of instruction still prevails in all medical colleges, and will probably continue for many years. Under the circumstances, students in attendance upon lectures can not with profit use as text-books treatises that have been written for the perusal and study of physicians who have been practitioners for years. They should have works from which have been eliminated long and learned discussions, containing, as far as possible, only accepted facts clearly explained.

Prof. King's Manual is well adapted for the purposes which it has been prepared. It fills the requirements text-book for students on obstetrics better than the ma ity of works of the kind with which we are acquainted. evidence of the high esteem in which it is held, is the that it has reached a fourth edition.

Editorial.

THE POISONOUS EFFECTS OF NICOTINE.—The evils tobacco-smoking have once more been terribly illustrate the case of a woman residing at Reading, Pa., who recently. She began smoking at the age of ten, and tinued to indulge in the vice until she died. How long might have lived if she had never contracted the habi using the weed, it is difficult to say. Under the circ stances, she brought herself to a "premature grave" at age of 102. Who can say that she would not have attai to the age of 150 years if she had left tobacco alone?

LA GRIPPE—INFLUENZA.—All of our readers have lear through the newspapers that a peculiar epidemic affect having originated in China and traveling westward, spread over all Europe and probably has reached this co try. At the time of our writing it has not reached Cin nati, although it may be prevailing here, in epidemic fo by the time the present number of the MEDICAL N reaches subscribers.

The Grippe—La Grippe—Russian Grippe—Epidemic fluenza is a disease that is produced by a peculiar micr The microbe, it is stated, is readily seen by a first- microscopic objective of high power. A good quarter objective, of 140° angle of aperture, assisted by the ampli tion of a deep eye-piece, no doubt will exhibit it. Certa an eighth or tenth immersion, with a B eye-piece, will d onstrate its presence clearly. We understand that, in o to show it satisfactorily, there is not necessary the com cated coloring processes that are required to exhibit a b lus tuberculosus. All the preparation needed is to sp thinly a very little nasal mucus upon a glass slide and p it under the objective.

We learn that the microbe is of a peculiar character very active in its movements, differing in that respect from the one in tuberculosis, which is motionless. This being the fact, there should be no difficulty in diagnosis; for the presence of the peculiar germ would settle the question at once whether or not a disease was *La Grippe*. As in all other epidemic maladies, some constitutions are more affected than others; but this differs, it is stated, from all extant epidemic diseases, with the single exception of dengue, in its power of reaching a great part of the population within a few days. It runs its course in any place it visits within a short time, sometimes in a week or two, and then passes on to some other place.

The onset of the disease is said to be as follows: The person affected complains of a muscular aching, with sensations of shivering or rigors, though the temperature is above the normal, as shown by the thermometer. Pyrexia of more or less severity follows. In light cases this will be noticed only at night, though generally, during the day, some acceleration of pulse will be observed with slight increase of temperature. In severe cases the thermometer will register 103° or more, especially at night. These symptoms continue from forty-eight to sixty hours, when often a profuse diaphoresis sets in. It should have been mentioned that during the progress of the disorder, beginning at the start, more or less headache is usually complained of and soreness of the throat. The mucous membrane of the nasal passages, even up into the frontal sinuses, becomes congested or subacutely inflamed, attended with sneezing and a constant discharge of a thin mucus.

In some cases cough of a hacking character is present. There seems to be a tendency for the soreness of the throat to find its way to the bronchial tubes. In such instances the continuance of the disease becomes greatly protracted. Not unfrequently pneumonia supervenes, and the prognosis becomes serious. Exposures to wet and cold and to an unhealthy atmosphere may develop pneumonia or acute bronchitis of a grave character. Though the epidemics in most places are generally light, and very few die from the effects, yet here and there—in cities, especially, where there are very many poor crowded together in unwholesome tenements, and there exist other unfavorable conditions—La Grippe assumes a very serious character, and is attended with a large mortality. We have heard that in some cities typhoid fever, as well as pneumonia, very often results.

All through the affection there is said to be a general ing of mental and physical depression. Sometimes throat symptoms and cough will not be marked, and in there will be severe abdominal pains. Probably in cases typhoid fever is more apt to occur. Along wit abdominal pains sickness of the stomach is often pre and a rash spreads over the surface of the body.

It is stated that the stage of incubation is about days. It is not contagious like smallpox or measles, b are cholera and typhoid fever. When it appears in a p it spreads through epidemic influence, and residents liable to contract it whether they are exposed to cas not.

La Grippe is to be treated on general principles. main effort should be to ameliorate the symptoms and tect the disease against complications until the mic ceases its existence. Evidently its life is limited from to three days. When the symptoms continue over sev two hours, they are not the result of the continuous ac of the germs, but follow upon the lesions that have bee up. There are no specific remedies. In other words, are no medicines at present known with which the organisms can be destroyed at the outset. For the ache and fever antipyrine has been found useful, an largely prescribed. We read a few days ago that it is in Paris by the ton. Quinine is said not to be of value. Tr. aconite root, tr. veratrum viride, and tr. donna are said to be useful in lessening the pulse and di ishing the heat. We can readily understand that would be useful. Of course, if pneumonia or typhoid complicates a case, the treatment must be according t symptoms that present themselves.

Recent dispatches say that the disease is abating at penhagen. It is stated to be spreading at Cassel, and n physicians have been attacked. At this place it is co cated in many cases with pneumonia.

It prevails to a great extent in London, and is incre in Vienna. The mortality here is large.

The Marquis of Salisbury is said to have the Grippe severe form. The Queen is stated to have sent Sir Jenner to attend him.

We learn that it is thought the epidemic is prevaili New York. Dr. Bryant, of the Board of Health, has is the following bulletin: " The increased death rate o diseases unfavorably influenced by the prevailing epidemic of influenza, emphasizes the importance of the employment of physical care on the part of all, healthy and diseased alike. Exposure to the influences of extremes of temperature should be avoided, especially by the aged and those who are afflicted with pulmonary disease. Persons suffering from colds or from suspected influenza should seek medical advice at once. The aged and infirm should avoid, as far as possible, personal contact with those already afflicted with influenza."

Large numbers of the police force in New York are said to be suffering from influenza, and are too sick to perform duty.

Reducing Fat.—Mr. Davies, in his work on "Foods for the Fat," says that two rats, weighing 12 oz., were placed on an exclusive diet of lean meat and water. They remained healthy in appearance, but steadily lost weight, and in a month's time weighed only 8¾ ounces. They were now placed on a miscellaneous diet, and in a week's time weighed 12½ ounces.

Book on the Physician Himself.—This is the title of a work we noticed among the Book Notices of the Medical News a few months ago. Our notice of it was briefer than we desired on account of want of space. But though we refer to it now, it is not for the purpose of describing it more in detail, but to express the regret that the moral principles set forth in it are not better understood among physicians and observed. A great many physicians, we feel sure, do not keep in mind the declaration that "whatsoever a man soweth, that shall he also reap." If they did, they would often hesitate to commit an act of injustice against others of their profession, for the reason expressed as follows by the author, Dr. Cathell: "Any one upon whom you encroach in an unprofessional manner will feel himself justified in retaliating with your own weapons, and you will reap a crop similar to the seed sown. Whenever you sow a thistle or a thorn, you will reap thistles or thorns; whenever a wind is sown, a whirlwind will be reaped; whilst the sweeter seeds sown by others will be yielding to others sweeter fruits. Away then with all that is unethical." Away, also, we advise, with all secret, undermining conduct. If preferment can not be obtained by merit, go without it. We advise every medical man to obtain a cop Dr. Cathell's "Physician Himself," and both read study it.

SULPHONAL.—This drug is exciting a great deal of i est in the profession at this time. It was discovered Prof. E. Baumann, of the University at Freiburg. physiological actions and clinical uses were first exami by Prof. Kast, who is a member of the medical facult Freiburg University.

Dr. Wile, editor of the *New England Medical Mont* pronounces it a reliable hypnotic, which has none of peculiar effects of the narcotics on the nervous and circ tory systems. Also, he says, it has no injurious secon effects, and may be taken in proper doses with impunit order to produce natural, quiet sleep.

Our experience with sulphonal probably has not bee great as Dr. Wile's, yet so far as it extends it is confir tory of his experience. We have found that it seldom to produce sleep. We have prescribed it in wakefulnes hysterical cases and in cases of insanity, and have found nearly all of the cases, that it promptly caused sleep. no instance, as sometimes happens with opium, morph hydrate of chloral, etc., did it increase the insomnia, produce any unpleasant effects upon the nervous syst We were recently called to attend a lady who informe that she was in the habit of taking ten grains of sulph every night, just before retiring to bed, in order to ca sleep. She said she had contracted this habit several mo before our seeing her. There were no indications of its ing injured her health. We have urged her to disconti the drug, but as she can not sleep without it, as she sta she continues taking it in violation of our remonstrances.

It is insoluble in water, and is absolutely free from t or smell. With very sensitive patients this fact is of siderable advantage.

Prof. Kast published the results of his experiments sulphonal in the *Berliner Klinische Wochenschrift*, No. 1888. Our friend, Dr. Wile, translates as follows: " gave the drug to twenty healthy persons, after having vinced himself of its relative harmlessness by experimen on dogs. These had demonstrated a decided physiolog action on the gray cortex of the cerebrum, inducing sou natural sleep, without any disagreeable after-effects.

dose usually employed was 2.0 to 3.0 Gm. (thirty to forty-five grains). Healthy persons would feel tired and sleepy after its administration, but only a minority of the whole number experimented upon (twenty) would actually fall asleep and remain asleep for a number of hours. Then sulphonal was given to more than thirty hospital and private patients, about one hundred and twenty single observations being recorded. Nervous sleeplessness, due to neuroses or psychoses, insomnia accompanying acute febrile diseases and sleeplessness of old age were principally selected for the purpose. Almost without exception sound and quiet sleep was produced within from thirty minutes to two hours after the administration of the drug. No untoward symptoms were observed on awakening, the sleep being as refreshing as if it had been due to natural causes. Pulse, respiration and digestion were not interfered with. The average dose was thirty grains—fifteen grains being sufficient for women, while men occasionally required forty-five grains."

The lady whom we mentioned as having taken ten grains every night for months, did not seem to find it necessary to increase the dose, by long continuance in using the drug, in order to produce the desired effect. After employing it for months, the same dose continued as efficient as at the start. We are told that Kast mentions as a remarkable feature of the drug that no tolerancy is established toward the drug—that its action is the same after many doses have been taken by the same individnal as after the first dose.

Every physician has noticed the effects of opium and its alkaloids in disturbing digestion. Taken before the ingestion of food, it lessens the secretion of the gastric fluid; besides it disturbs digestion by constipating the bowels, and bringing about other ill secondary effects; but sulphonal never interferes with the digestive processes. Dr. G. Rabbas says that he never witnessed digestion, respiration or the heart's action unfavorably influenced by it, and consequently warmly recommends its use.

Dr. Hageman, in the *New England Medical Monthly*, in an article headed "Sulphonal in Reflex Muscular Spasm," reports a singular case illustrating the effects of sulphonal. Dr. H. was called last March to a boy, eleven years old, that had suffered a fracture of the tibia. After adjusting the fracture he prescribed a powder of sulphonal—fifteen grains—at the suggestion of the mother, "to make him sleep." The mother, however, did not administer the medicine as directed; but continued to give the fifteen grain powders at such short intervals that, in the course of an hour or two, she had administered *seventy grains*.

On calling the next morning and learning the facts in regard to the excessive amount of sulphonal that had been administered the boy, the doctor was at first astonished and very anxious as regarded the results. But the tranquil expression of the patient and the perfectly normal pulse and respiration reassured him.

He endeavored to rouse the boy but failed, and so he dressed the limb anew and went away. He saw him a number of times during the day, his condition continuing the same. At six in the evening he raised him up and poured a teaspoonful of water in his mouth. The water, however, ran out of his mouth, no effort at swallowing being made. The next morning he swallowed a little milk, and in the evening uttered the word "mamma." After a continuous sleep of four days he began to exhibit signs of consciousness, and soon after revived from his deep narcotism. No evil effects whatever resulted.

WOODMANSEE'S INK.—In the last number of the MEDICAL NEWS we expressed surprise that people of this country should send to England for common writing ink, when we had no doubt but that the inks made at home were as good as any made in the world. Mr. Woodmansee, of Cincinnati, who read our article, says that he manufactures a "combined writing and copying ink" that is absolutely permanent. The chemicals from which it is manufactured are indestructible by time—the writing becoming more intensely black by age. Papers written with this ink can be soaked in water for months without injuring the writing, the letters remaining clear, distinct and unblurred as when first written. This ink is well-adapted for deeds, wills, records, ledger and book accounts generally. It flows smoothly, and will not get thick nor mold.

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It is a disgrace to our country to import inks from Europe, as if we, in this country, had not made sufficient advancement to make good ink. If Americans can make fine watches and pianos that Europeans acknowledge are superior to their manufacture, why is it they can not make ink

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EDITED BY

J. A. THACKER, A. M., M. D., F. R. M. S., Lond.

Fellow of American Academy of Medicine, Etc.

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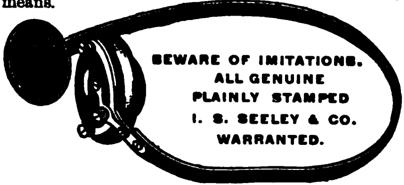

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Tanret's Pelletierine and Ergotinine, are only prepared by Mr. Chas. Tanret, Laureate of the Institute France, 64 Rue du Rempart, Paris.

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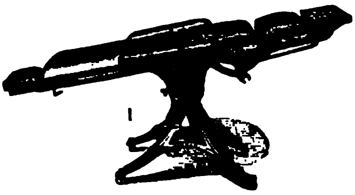

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